

## TERMS OF REFERENCE

### Procurement of Systems Integration Services for the *Supply, Delivery, Installation and Commissioning of the NEA Digital Dashboard Command Center (DDCC) - Phase 2*

## RATIONALE

Following the successful completion of the Pilot Phase, NEA aims to extend the functionalities and benefits of the **NEA Digital Dashboard Command Center (DDCC)** to a broader range of Electric Cooperatives (ECs). In addition to the three initial pilot EC sites implemented, the platform will now proceed to the second phase of the project that will deploy the NEA DDCC – EC SCADA Interface to collect relevant information from EC Supervisory Control and Data Acquisition (SCADA) systems and available supporting operations monitoring and financial systems of an additional sixty (60) ECs and consolidate and integrate this data with the NEA Digital Dashboard Solution, further enhancing NEA's capability to monitor, coordinate, and manage the ECs' performance effectively.

Additional EC Geographical Information Systems (GIS) Maps/Data/Displays from the ECs as well as data and information from the NEA enhanced Integrated Computerized Planning Model (eICPM) and other NEA Departmental Systems databases/files will also now be integrated into the DDCC.

It is imperative that the NEA DDCC – EC SCADA interface software provided for this second phase **SHOULD CONFORM** to and be integrated with the solutions architecture, software applications, computer hardware and equipment of the **EXISTING NEA DDCC** developed during the Pilot Phase of this project.

The deployment of the NEA DDCC Project is the next critical step towards achieving a fully integrated and efficient monitoring system for all ECs. By leveraging advanced technologies and comprehensive data integration, NEA will enhance its governance, transparency, and response capabilities, contributing to the goal of full electrification in the Philippines by 2028.

## OBJECTIVES

The NEA DDCC Phase 2 aims to:

1. Expand the DDCC to cover an additional sixty (60) ECs.
2. Further enhance NEA management's ability to make timely, data driven decisions.
3. Provide extended monitoring of EC performance, including financial, technical, operational, and institutional metrics.

## A. PROJECT DESCRIPTION

**NAME OF PROJECT** : Procurement of Systems Integration Services for the Supply, Delivery, Installation and Commissioning of NEA Digital Dashboard Command Center (DDCC) Phase 2

**LOCATION/DELIVERY SITES** : National Electrification Administration #57 NIA Road, Diliman, Quezon City, and the Sixty (60) Electric Cooperatives specified in Section D or as may be updated by NEA to the winning bidder, provided that the total number of ECs shall not exceed sixty (60).

**APPROVED BUDGET FOR THE CONTRACT** : The Approved Budget of the Contract (ABC) is Ninety Million Six Hundred Thirty-Seven Thousand One Hundred Sixteen Pesos & 49/100 (₱90,637,116.49), inclusive of all applicable taxes, chargeable against NEA GAA 2024 Corporate Operating Budget (COB) under Capital Outlay, IT Equipment

The itemized/detailed costing/breakdown of the cost components of the project proposal must be included/submitted in the financial bid proposal

**TERMS/PROJECT DURATION** : The duration of the contract is six (6) months which will commence within seven (7) calendar days upon receipt of the Notice to Proceed (NTP). The timelines and milestones are depicted in the GANTT Chart below:

Terms of Reference

Procurement of Systems Integration Services for the Supply, Delivery, Installation and Commissioning of NEA Digital Dashboard Command Center Project (Phase 2)

Project Activity / Task	Week # Days	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
<b>Project Management</b>																									
Prepare Project Management Plan	5																								
Prepare Project Implementation Plan	5																								
Prepare Quality Assurance Plan	5																								
Prepare Risk Management Plan	5																								
Submit Project Plans & Secure Sign-off	10																								
Project Management & Control	60																								
<b>NEA DDCC Renovation Works</b>																									
Project Supervision	60																								
Site Safety	60																								
Mobilization and Demobilization	1																								
Construction of Temporary Facility	1																								
Temporary Lighting & Power	1																								
Demolition & Dismantling Works	7																								
Roughing-ins: Plumbing, Electrical, Mechanical	10																								
Installation of Flat Ceiling	10																								
Installation of Drywall and Masonry Partitions	10																								
Installation of Glass Walls and Doors	4																								
Painting of Ceiling, if any	10																								
Painting and Cladding of Walls	10																								
Tileworks	6																								
Installation of Built-in Furnitures	10																								
Installation of Electrical, Mechanical, Plumbing Fixtures	3																								
Delivery of Loose Furnitures & Equipment	2																								
Secure Sign-off for Command Center Civil Works & Equip	5																								
<b>NEA DDCC - EC System Development</b>																									
Define/Confirm Requirements	5																								
Prepare Detailed System Design	10																								
Define Cyber Security and Data Protection Strategy	10																								
Submit Detailed System Design and secure sign-off	10																								
EC API Technical Support and Implementation	10																								
Conduct User Acceptance Testing and Secure Sign-off	5																								
<b>Implementation</b>																									
Install HW & SW (Staging Facility)	10																								
Develop Training Plan	10																								
Conduct NEA and EC User Training	60																								
Delivery & Installation of EC Side HW, System SW & NEA DDCC-EC Interface	60																								
Implementation of NEA DDCC-EC Interfaces & Completion of Interface Testing	60																								
Provide Implementation Support	60																								
<b>Post Implementation</b>																									
Set-up Help Desk	15																								
Perform Problem Reporting & Corrective Action	90																								
Provide Post Impln Support	60																								

The activities and corresponding timelines can be subjected to acceleration but delays shall be subjected to liquidated damages as outlined in Section Q.

## B. QUALIFICATIONS OF BIDDER/S

1. The bidder must have proven track record as a systems integrator that has completed projects covering the supply, delivery, installation and maintenance of software, computer hardware, and services.
2. The bidder must have a physical office located in the Philippines supporting similar IT-based projects.
3. The bidder must have completed a successful Systems Integration Projects with similar technical complexity or analogous to the current DDCC platform involving various software languages.
4. The Project Team must meet all the qualifications as specified in Section F hereof.

## C. DEFINITIONS

Client: NEA is the primary client.

IT Systems Integrator: A company that brings various computer hardware, software programs, equipment and network infrastructure for component sub-systems from multiple suppliers together into a whole integrated system, ensuring that those sub-systems are able to interface and work together to deliver specified system features and functions.

## D. SCOPE OF WORK

The scope of work for NEA DDCC Phase 2 consists of Systems Integration Services to connect and interface the SCADA and other in-house systems of an additional sixty (60) ECs with the NEA DDCC. These services include the development and provision of customized software for the NEA DDCC to receive and record data from the ECs as well as technical assistance to the ECs on the development and implementation of application interface software to access or extract data from EC SCADA and/or in-house systems and send this data to the NEA DDCC.

The scope of work also includes the expansion of the physical facilities of the NEA National Command Center that houses the NEA DDCC and the provision of additional computer hardware and equipment.

Listed below are the major components that are included in the scope of work for this project with a corresponding detailed listing of the technical specifications and/or description of these components in the following Section E.

1. Systems Integration Services for Phase 2 of the NEA Digital Dashboard Command Center (DDCC) Project. This consists of the following service components:
  - 1.1. Systems Integration Project Management of Phase 2 of the NEA DDCC project, including Project Planning and Control, and provision of various project plans.
  - 1.2. Design, development and implementation of EC Interface - customized software to collect, and store data from SCADA and in-house systems of a total of sixty (60) Electric Cooperatives (ECs), store this data, initially at the EC level, and then to transmit and store at the central NEA EC Performance database to be processed and presented in NEA DDCC.

The initial selection of ECs is listed below. The final list shall be provided by NEA to the winning bidder upon Notice of Award. Forty-eight (48) of these ECs have SCADA systems in partial (Level 1 and Level 2) compliance to the Smart Grid Policy Framework for the Philippines Electric Power Industry and Roadmap for the Distribution Utilities. These are ECs that have initiated the installation and integration of reclosers, sectionalizers, load break switches, fault circuit indicators, SCADA systems, and or GIS.

	<b>Electric Cooperative</b>
1.	Ifugao (IFELCO)
2.	Kalinga Apayao (KAELCO)
3.	Ilocos Norte (INEC)
4.	Ilocos Sur (ISECO)
5.	Cagayan I (CAGELCO I)

6.	Cagayan II (CAGELCO II)
7.	ISABELA I (ISELCO I)
8.	Nueva Vizcaya (NUVELCO)
9.	Tarlac II (TARELCO II)
10.	Nueva Ecija I (NEECO I)
11.	Nueva Ecija II (NEECO II) Area 1
12.	Nueva Ecija II (NEECO II) Area 2
13.	San Jose City (SAJELCO)
14.	Pampanga I (PELCO I)
15.	Pampanga III (PELCO III)
16.	Peninsula (PENELCO)
17.	Zambales I (ZAMECO I)
18.	Zambales II (ZAMECO II)
19.	First Laguna (FLECO)
20.	Batangas I (BATELEC I)
21.	Batangas II (BATELEC II)
22.	Quezon II (QUEZELCO II)
23.	Palawan (PALECO)
24.	Camarines Norte (CANORECO)
25.	Camarines Sur IV (CASURECO IV)
26.	Sorsogon II (SORECO II)
27.	Aklan (AKELCO)
28.	Antique (ANTECO)
29.	Capiz (CAPELCO)
30.	Iloilo I (ILECO I)
31.	Iloilo II (ILECO II)
32.	Central Negors (CENECO)
33.	Cebu II (CEBECO II)
34.	Bohol I (BOHECO I)
35.	Negros Oriental II (NORECO II)
36.	Leyte II (LEYECO II)
37.	Leyte V (LEYECO V)
38.	Southern Leyte (SOLECO)
39.	Zamboanga del Norte (ZANECO)
40.	Zamboanga del Sur I (ZAMSURECO I)

41.	Bukidnon I (FIBECO)
42.	Davao del Sur (DASURECO)
43.	North Cotabato (COTELCO)
44.	South Cotabato I (SOCOTECO I)
45.	South Cotabato II (SOCOTECO II)
46.	Sultan Kudarat (SUKELCO)
47.	Agusan del Norte (ANECO)
48.	Agusan del Sur (ASELCO)

Twelve ECs are in the process of planning and procuring for the SCADA project.

	<b>Electric Cooperative</b>
49.	La Union (LUELCO)
50.	Pangasinan III (PANELCO III)
51.	Tarlac I (TARELCO I)
52.	Pampanga Rural (PRESCO)
53.	Pampanga II (PELCO II)
54.	Quezon I (QUEZELCO I)
55.	Cebu I (CEBECO I)
56.	Bohol II (BOHECO II)
57.	Leyte III (LEYECO III)
58.	Leyte IV (LEYECO IV)
59.	Bukidnon II (BUSECO)
60.	Lanao Norte (LANECO)

*Refer to Appendix A for the description of the levelling compliance to the Smart Grid Policy Framework for the Philippines Electric Power Industry and Roadmap for the Distribution Utilities.*

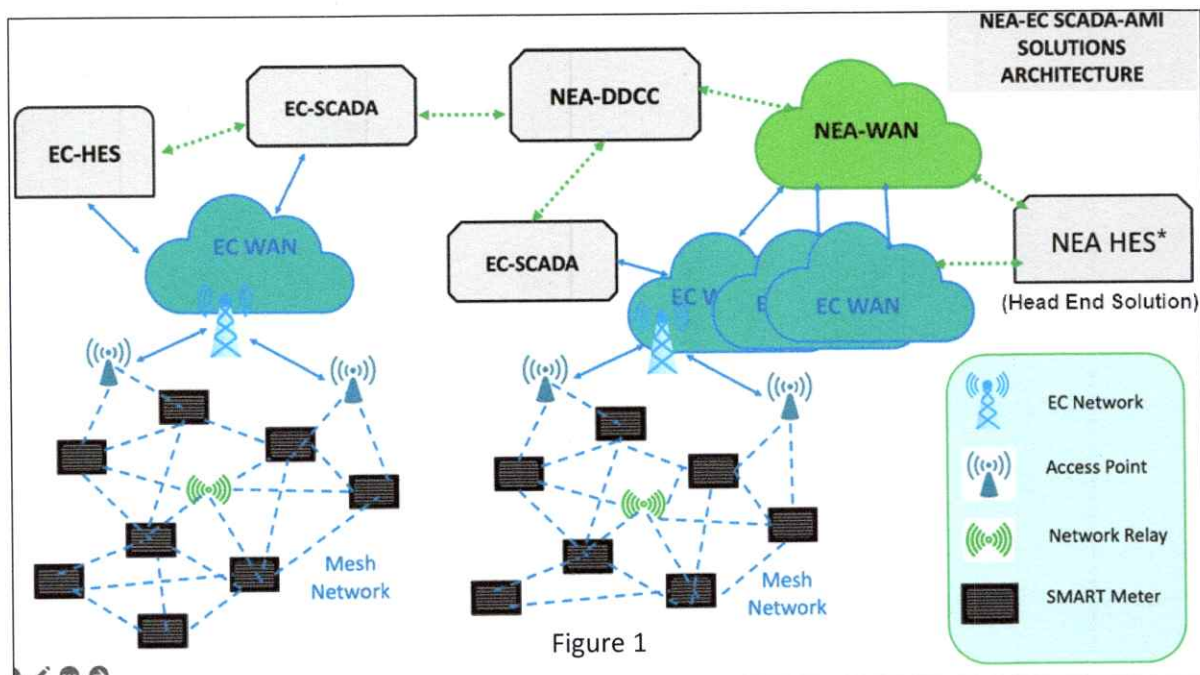
1.3. Provision of technical services to enable the ECs to develop and implement the Application Program Interfaces (APIs) and/or extract programs needed to send data to the NEA DDCC from their SCADA and in-house systems. This shall include orientation, guidance, and technical assistance to EC IT and SCADA/Operations personnel and shall cover the following:

- 1.3.1. NEA DDCC – EC Interface output data/ data table specifications
- 1.3.2. NEA DDCC – EC Application Programming Interfaces (APIs)
- 1.3.3. EC SCADA and GIS Live Interface implementation
- 1.3.4. Operationalization of NEA DDCC – EC SCADA interface

1.4. Provision of the hardware, software, and equipment needed to receive and record technical data to be transmitted to the NEA Digital Dashboard Command Center

(DDCC) from the EC SCADA and in-house systems of the sixty ECs. This includes data from other EC systems such as EC financial systems; warehouse inventory management systems of the ECs; and/or EC Regional Procurement Hubs (RPHs).

- 1.5. Design and provide specifications for the Application Program Interface (API) software to be used to send data to the NEA DDCC from an Advanced Metering-Infrastructure/Head End System (AMI/HES), aligned with the Solutions Architecture shown in Figure 1 below. The API software shall be designed to allow transactions and other data files/records to be transmitted to the NEA DDCC Dashboard solution database from a third-party AMI/Head End System.



#### HES SUBSCRIPTION OPTIONS\*

**Option 1.** ECs integrating with the Digital Dashboard Command Center (DDCC) will shoulder the subscription costs.

**Option 2.** NEA will provide a generic, universal HES. ECs in a region get a “Discounted Regional Rate”.

**Option 3.** NEA will provide a generic, universal HES and each EC will subscribe to the platform at a cost which is consistent with economies of scale.

- 1.6. Documentation of the detailed design of the software interface to send data to the NEA DDCC from an AMI/HES as well as the software to receive and record technical data needed by the NEA DDCC from EC in-house operations monitoring systems. This document shall also include the Cyber Security Plan outlining the policies, procedures, and practices that NEA will follow to ensure the confidentiality, integrity, and availability of its information systems and data

- 1.7. Provision of services for and on behalf of NEA, to arrange for one or more third party AMI/HES Software as a Services (SaaS) facilities that may be separately and

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directly engaged by ECs in order to manage and operate their respective AMI systems. These SaaS facilities shall be made available by the third party AMI/HES provider(s) to the ECs on an optional, pay per use/transaction basis and in compliance with EC procurement guidelines. The third party AMI Head End System must have multi-tenancy capability to allow shared but separately managed use by ECs, as well as the capability to interface with the electric meters of multiple major electricity meter brands/ suppliers, based on industry standards.

2. Provision of a training services and a training plan that shall include the overall goals and program implementation of the training, the methods which will be used to assess training effectiveness, description of the major training deliverables, and a brief outline on how those deliverables will be implemented. The plan should also include the following:
  - 2.1. *Training organization* – outlines the planned project training organization and the staffing structure. A description of the training coordination team will be discussed in detail.
  - 2.2. *Training administration* – discusses the planned training administration package and tool that be used to schedule all training classes, notify participants, and track attendance through completion of the program. Training certificates will be issued to each of the participants who have successfully completed the training. Hardcopy and softcopy of the training materials will be provided.
  - 2.3. *Training facilities* – describes the plan for utilization of EC and/or NEA face-to-face training and/or online virtual training facilities.
  - 2.4. *Conduct train-the-trainer sessions* whereby supervisory or senior personnel attend and assume subsequent training roles. Instructor guides will be provided in softcopy form.
  - 2.5. *All ancillary costs related to training*, whether held in NEA or ECs shall be borne by the winning bidder.
3. Expansion of the NEA National Command Center physical facilities that house the NEA DDCC. This expansion includes civil works for the construction of a reception area with a pantry, a data center/IT room, relocation of server rack to the data center room, the provision and installation of fire suppression systems, and a generator set with automatic transfer switch. The provision of additional computer workstations and videowall monitors are also included in this expansion of the NEA National Command Center.

## E. TECHNICAL SPECIFICATIONS

Based on project evaluation, below are the minimum required technical specifications for Phase 2 of the NEA DDCC Project. Since the bidder is providing a complete Systems Integration Service, the quantity and capacity of the resources to be provided will depend on each EC specific SCADA and in-house computer system environment. During the acceptance testing, the overall performance of the NEA DDCC – EC software interface service provided will be assessed in terms of meeting reasonable processing turnaround and system response time.



Item No.	Technical Specification	Minimum Requirement	QTY
1.	<b>Systems Integration Services</b>		1 Lot`
1.1.	Systems Integration Project Management	Overall systems integration project management of the NEA DDCC Phase 2 project, including management of all Phase 2 project services and deliverables at both the NEA Command Center and all EC sites, as well as Project Planning and Control, provision of various project plans.	
1.2.	NEA DDCC – EC SCADA Interface Software	Provide a software facility to collect, send and consolidate data from SCADA and in-house systems of a total of sixty (60) Electric Cooperatives (ECs) and store this data in the central NEA EC Performance database to be processed and presented in NEA DDCC.	
1.3.	NEA DDCC – EC API Technical Services	Technical services to enable EC IT and SCADA/ Operations personnel to develop and implement the Application Program Interfaces (APIs) and/or extract programs needed to send data to the NEA DDCC from their SCADA and in-house systems	
1.4.	Software Design & Specifications Services for NEA DDCC – AMI/HES APIs	<p>Provide a detailed software design and specifications for the Application Program Interface (API) software to send data to the NEA DDCC from an Advanced Metering-Infrastructure/Head End System (AMI/HES), aligned with the Solutions Architecture shown in Section D.1.5.</p> <p>Provide a detailed design and software enhancement of the NEA Dashboard software to receive and record data at the NEA DDCC end from the AMI/HES.</p> <p><b>The corresponding detailed design documentation shall include the following key components:</b></p> <ul style="list-style-type: none"> <li>• <b>Overview of the NEA Dashboard software enhancement including high-level software architecture diagram.</b></li> <li>• <b>Outline of the key functions to be fulfilled by the software enhancement.</b></li> <li>• <b>Specifications of the database changes and resulting data tables.</b></li> </ul>	

		<ul style="list-style-type: none"> <li>• <b>User interface screen designs</b></li> </ul> <p>The NEA Dashboard software enhancement shall, at a minimum, include the following key features:</p> <ul style="list-style-type: none"> <li>• Additional data tables to receive key data from the HES.</li> <li>• Recording of key consumption data per EC and EC consumer.</li> <li>• Priority AMI/HES event and alarms data recording</li> <li>• EC aggregate consumer billing data recording</li> <li>• Major AMI/HES outage event recording</li> <li>• Additional NEA Dashboard widgets to monitor and report on EC consumer major events and aggregate billing related data.</li> </ul> <p>Provide detailed documentation of the software design and specifications for the API software and receiving software as well on the NEA DDCC side. This document shall also include the Cyber Security Plan outlining the policies, procedures, and practices that NEA will follow to ensure the confidentiality, integrity, and availability of its information systems and data</p>	
1.5.	AMI/HES SaaS Facility Services	Provide services for and on behalf of NEA, to arrange for one or more third party AMI/HES Software as a Services (SaaS) facilities that may be separately and directly engaged by ECs in order to manage and operate their respective AMI systems.	
<b>2.</b>	<b>NEA DDCC Training Services</b>		<b>1 lot</b>
2.1.	Training Plan	This shall include the overall goals and program implementation of the training, the methods which will be used to assess training effectiveness, description of the major training deliverables, and a brief outline on how those deliverables will be implemented.	
2.2.	Training organization plan	An outline of the planned project training organization and the staffing structure	

2.3.	Training administration plan	A description of the planned training administration package and tool that be used to schedule all training classes, notify participants, and track attendance through completion of the program.	
2.4.	Training facilities plan	A description of the plan for utilization of EC and/or NEA face-to-face training and/or online virtual training facilities.	
2.5.	Train-the-trainer services	Train-the-trainer sessions whereby supervisory or senior personnel attend and assume subsequent training roles	
<b>3.</b>	<b>NATIONAL COMMAND CENTER - Expansion  Civil Works</b>		<b>1 Lot</b>
3.1.	<p>Scope of Work covering:</p> <ul style="list-style-type: none"> <li>• Extension of DDCC</li> <li>• Reception Area,</li> <li>• Toilet &amp; Ante Room</li> <li>• Pantry</li> <li>• IT Room</li> </ul> <p>Refer to Appendix B for Diagram of additional Command Center Civil Works.</p>	<ul style="list-style-type: none"> <li>• Mobilization, demobilization and power interruption.</li> <li>• Supply and installation/laying of electrical roughing-ins;</li> <li>• Supply and installation of conduit, pipes and cable trays;</li> <li>• Supply and installation of electrical lightings, fixtures and accessories;</li> <li>• Supply and installation of electrical switches and its accessories;</li> <li>• Supply and installation of receptacle outlets and its accessories;</li> <li>• Supply and installation of enclosures, panel boards and circuit breakers;</li> <li>• Supply and installation of electrical wires/cables, connectors, insulators and groundings.</li> <li>• Supply and installation of flooring materials (carpet tiles, porcelain tiles).</li> </ul>	
3.2.	Masonry	<ul style="list-style-type: none"> <li>• Concrete hollow blocks for interior walls unless otherwise indicated shall be 100 mm thick. For interior walls where plumbing pipes and fittings shall be located, the thickness shall be at least 150 mm.</li> <li>• The concrete hollow block walls shall be laid, and the cells filled with the cement mortar consisting 1 part of Portland cement and 3 parts sand by volume. They shall be reinforced with round deformed bars with 10mm diameter, spaced not more than 0.80 on centers, both ways.</li> </ul>	

		<ul style="list-style-type: none"> <li>All exposed surfaces of concrete hollow block walls shall be finished with the specified materials indicated on the elevation drawings.</li> <li>The mixture of cement plaster for concrete hollow block wall finished indicated in the drawing shall be 1 part cement, 1 part water and 3 parts sand.</li> </ul>	
3.3.	Drywall	<ul style="list-style-type: none"> <li>Type: Gypsum board, fire-rated where required.</li> <li>Thickness: 12.5mm for walls, 15mm for ceilings.</li> <li>Finish: smooth finish ready for painting</li> <li>Installation: Metal stud framing, screw-fixed</li> </ul>	
3.4.	Flooring	<p><b>Digital Dashboard Command Center Expansion, Back Office, and Data Center</b></p> <ul style="list-style-type: none"> <li>MATERIAL: Carpet Tiles</li> <li>SIZE: 500X500mm</li> <li>DESIGN: C09-previous supplier</li> <li>DESIGN: Floor Tile</li> </ul> <p><b>Toilet and Ante Room</b></p> <ul style="list-style-type: none"> <li>MATERIAL: Porcelain Tiles</li> <li>SIZE: 600X600mm</li> <li>DESIGN: Anti Slip Floor</li> </ul>	
3.5.	Ceiling	<p><b>Toilet, Ante, Data Center, Back Office</b></p> <ul style="list-style-type: none"> <li>Gypsum board ceiling and PVC ceiling panels</li> <li>Metal furring channels serve as the framework to which gypsum boards are attached.</li> </ul> <p><b>DDCC and Reception Area</b></p> <ul style="list-style-type: none"> <li>PVC Ceiling Panel</li> <li>PVC Ceiling Panel-V Groove</li> <li>Dimension: 7x180x2950mm</li> <li>Finish: Matte</li> </ul>	
3.6.	Wall Finishes	<p><b>Toilet</b></p> <ul style="list-style-type: none"> <li>Wall Tiles-(WF-1)             <ul style="list-style-type: none"> <li>Wall Tile 30x60cm</li> </ul> </li> <li>WPC (Wood Plastic Composite) Fluted Panel &amp; Bronze Curtain Panel             <ul style="list-style-type: none"> <li>Pine Teak 9mmx155mmx2900mm</li> <li>Bronze Curtain Panel- 9mmx300xmmx2900mm</li> </ul> </li> </ul> <p><b>Common Area</b></p>	

		Wall paper – same as the existing wall	
3.7.	Ante Countertop and Undercounter Cabinet	<p><b>Ante Counter</b></p> <ul style="list-style-type: none"> <li>• Polar White (modified acrylic resin) Solid Surface Material</li> </ul> <p><b>Undercounter Cabinets</b></p> <ul style="list-style-type: none"> <li>• Teak Color High Pressure Laminated Board</li> </ul>	
3.8.	Glass Works and Frosted Sticker	<p><b>Data Center, Back Office, and DDCC Area</b></p> <ul style="list-style-type: none"> <li>• 12mm Thick tempered frameless glass used u-channel</li> <li>• 2 way swing 12mm thick frameless glass door with transom glass on top</li> </ul> <p><b>Toilet Mirror Panels</b></p> <ul style="list-style-type: none"> <li>• 6MM Beveled Edges Mirror with Backlight</li> </ul>	
3.9.	Signage	<p><b>Indoor Signage</b></p> <ul style="list-style-type: none"> <li>• Acrylic material die cut, backlighted on metallic look vinyl sticker</li> </ul> <p><b>Plaque Relocation</b> Remove the plaque on the column and relocate in the drywall near main entrance of the facility.</p>	
3.10.	Fixtures	<p>In the toilet, urinal, handwashing accessories use fixtures with high quality and internationally recognized certifications</p> <ul style="list-style-type: none"> <li>• Water closets</li> <li>• Urinal</li> <li>• Lavatories</li> <li>• Soap holder</li> <li>• Toilet paper holder</li> <li>• Floor drain - Size 100mm x 100mm Stainless steel (List other materials if necessary)</li> </ul>	
3.11.	Furniture	<p><b>Working table</b></p> <ul style="list-style-type: none"> <li>• 4 pcs- 600x1200mm working table</li> <li>• 10 pcs – High-back Mesh Office Chair</li> </ul> <p><b>Reception Table</b></p> <ul style="list-style-type: none"> <li>• 1 Pc- Reception Table With Chair</li> </ul>	
3.12.	Mechanical	<p><b>Airconditioning</b></p> <ul style="list-style-type: none"> <li>• 1 unit of 2TR Inverter Type - Wall Mounted A (same brand as currently installed)</li> <li>• 2 units of 3 TR Inverter Type-Ceiling Cassette - RELOCATION ONLY</li> </ul> <p><b>Ventilation and Exhaust System Toilet And Ante Room</b></p>	

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		<ul style="list-style-type: none"> <li>• 12 Inches Ceiling Exhaust Fan</li> <li>• Power: 1100 Rpm</li> <li>• Wattage: 42w</li> <li>• Voltage: 230V/60Hz</li> <li>• Airflow: 220CHM</li> </ul>	
3.13.	Electrical	<ul style="list-style-type: none"> <li>• The electrical installation shall be done in accordance with the approved plans and under the direct supervision and control of a licensed Professional Electrical Engineer or Master Electrician.</li> <li>• All electric works and materials shall conform to the provisions of the latest edition of the Philippine or the National Electric Code.</li> <li>• The electrical wiring shall be installed thru coil able PVC electrical conduit fittings and appurtenances that conform to ISO dimensions.</li> <li>• Minimum size of wires shall be 2.0 mm<sup>2</sup> TW for switch and lighting line 3.5 mm<sup>2</sup> for power line in 12mm diameter PVC conduit.</li> <li>• Electrical materials to be used for the electric installation shall as follows:             <ul style="list-style-type: none"> <li>○ Automatic Circuit breaker:</li> <li>○ Flush wall switches, convenience Outlets other wiring devices</li> <li>○ Wires/Conductors</li> <li>○ Rose gold pin light case installed with 7W GU10 LED Bulb</li> <li>○ single bulb area light 1200x50mm</li> <li>○ 35w power supply led rope light warm white</li> </ul> </li> <li>• The spare circuit shall be provided with an empty PVC pipe, size 19mm diameter which should extend at least 300mm above the ceiling line. The grounding wires shall be identified and all wires shall be color-coded for easy identification.</li> <li>• The panel board shall be provided with a circuit directory.</li> </ul>	
3.14.	Plumbing	<ul style="list-style-type: none"> <li>○ All plumbing works for this project shall be in accordance with the approved plans and under the direct supervision and control of a licensed Sanitary Engineer or Master Plumber.</li> </ul>	

		<ul style="list-style-type: none"> <li>○ Piping shall be properly graded or pitched to ensure easy circulation, drainage and prevent water hammer and noise.</li> <li>○ The plumbing installation shall conform to the provisions of the National Plumbing Code and the rules and regulations enforced in the locality.</li> <li>○ Piping for drain, waste and vent shall be done using the uPVC push-on-system.</li> <li>○ For the in-house water supply installation, uPVC pipes and fittings shall be used.</li> </ul> <p><b>Location of plumbing works:</b></p> <ul style="list-style-type: none"> <li>○ Toilet</li> <li>○ Ante Room</li> <li>○ Data Center &amp; Back Office Aircon Drainage</li> </ul>	
<p>3.15.</p>	<p>Generator Set</p>	<ul style="list-style-type: none"> <li>○ Rated Power: 35 KVA</li> <li>○ Rated Voltage: 230V</li> <li>○ Frequency: 60 Hz</li> <li>○ Silent Type</li> </ul> <p>Genset with Automatic Transfer Switch</p> <ul style="list-style-type: none"> <li>• Mobilization and demobilization of equipment and personnel for the installation process, including managing any necessary power interruptions.</li> <li>• Supply and installation of generator set foundation and mounting to ensure secure placement.</li> <li>• Installation of Automatic Transfer Switch (ATS) and associated wiring to facilitate seamless power transfer.</li> <li>• Connection of generator set to electrical panel and load circuits to provide backup power when needed.</li> <li>• Installation of necessary fuel lines and connections for the generator set.</li> <li>• Testing of the ATS and generator set to ensure proper functionality and integration with existing electrical systems.</li> <li>• Conducting load testing to verify the performance of the generator set under</li> </ul>	

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		<p>various conditions.</p> <ul style="list-style-type: none"> <li>• Providing training on generator set operation, maintenance, and ATS functionality to designated personnel.</li> <li>• Documentation of the installation process, including as-built drawings and operation manuals.</li> <li>• Final inspection to ensure compliance with specifications and safety standards before handover to the client.</li> </ul> <p>Installation Requirements:</p> <ul style="list-style-type: none"> <li>• Assessment of site conditions to determine the optimal placement of the generator set and ATS for safety and functionality.</li> <li>• Inspection of existing electrical infrastructure to assess compatibility and integration with the new equipment.</li> <li>• Planning for any necessary power interruptions to facilitate safe installation procedures.</li> <li>• Implementation of safety measures to protect personnel and property during the installation process.</li> <li>• Coordination with other trades or systems integrators working on the site to ensure seamless integration of the generator set and ATS into the overall project.</li> </ul>	
3.16.	Automatic Transfer Switch	<ul style="list-style-type: none"> <li>• Power Rating <ul style="list-style-type: none"> <li>- Rated Power: 35 kVA</li> <li>- Voltage: 230V</li> <li>- Frequency: 60 Hz</li> </ul> </li> <li>• Transfer Type <ul style="list-style-type: none"> <li>- Closed Transition</li> </ul> </li> <li>• Control Features <ul style="list-style-type: none"> <li>- Manual and Automatic Mode</li> <li>- Voltage Sensing: Yes</li> <li>- Frequency Sensing: Yes</li> <li>- Delay on Transfer and Re-transfer: &lt; 10 Seconds</li> </ul> </li> </ul>	
3.17.	Fire Suppression for DDCC, DDCC Extension & Data Center	<p><b>Functional Description</b></p> <ul style="list-style-type: none"> <li>• Prepare a comprehensive design that includes system layout, gas quantity calculations, piping, and nozzle placements.</li> </ul>	



		<ul style="list-style-type: none"><li>• Supply all equipment and materials, including FM200 gas cylinders, valves, piping, nozzles, control panels, and detection systems. Install the system according to the approved design and manufacturer's guidelines.</li><li>• Integration: Integrate the suppression system with existing fire detection and alarm systems, ensuring compatibility and proper operation.</li></ul> <p><b>Specifications</b></p> <ul style="list-style-type: none"><li>• Clean Agent: FM200 Agent / HFC-227ea (Heptafluoropropane) with certification from UL or FM.</li><li>• Agent Quantity: Calculated based on room volume of the intended area to achieve a concentration in accordance with NFPA 2001 standards.</li><li>• Cylinder Size and Quantity: Sufficient to cover the protected area volume with a 10% safety margin.</li><li>• Control Panel: Single-zone fire suppression control panel with battery backup.</li><li>• Detection System: Minimum of two smoke detectors installed at strategic locations within the room. Said system shall likewise provide interface to Building FDAS for remote annunciation</li><li>• Nozzles: Distribution nozzles strategically placed to ensure even discharge and coverage throughout the room.</li><li>• Piping: Galvanized steel or equivalent material sized for high-pressure release.</li><li>• Alarm Devices: Visual and audible alarm units installed inside and outside the room to alert occupants in case of discharge.</li><li>• System Bypass: Bypass release system to prevent discharge of clean agent. Shall include audible and visible indicators to show when system is bypassed.</li><li>• System Override: Override release system to manually activate discharge of clean agent. Should come with double-action mechanism to prevent accidental</li></ul>	
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		<p>activation. Override shall likewise have a visual indicator to show override has been activated.</p> <ul style="list-style-type: none"> <li>Standards Compliance: NFPA 2001: Standard for Clean Agent Fire Extinguishing Systems. ISO 14520: Gaseous Fire-Extinguishing Systems – Physical Properties and System Design.</li> <li>Local Fire Codes and Regulations: Compliance with all applicable local codes.</li> <li>Location: The suppression system must be installed in a dedicated area where cylinders are accessible yet secure.</li> <li>Electrical and Mechanical Integration: Ensure that all electrical connections (control panel, detectors, alarms) and mechanical fittings (piping, nozzles) are properly installed and comply with standards.</li> <li>Testing and Handover: Conduct all required tests to validate system functionality and compliance with safety standards.</li> </ul>	
4.	Safety and Compliance	<ul style="list-style-type: none"> <li>All work must comply with local building codes and regulations.</li> <li>Fire safety measures, including fire-rated materials and emergency exits, must be implemented.</li> </ul>	
5.	Quality Assurance	<ul style="list-style-type: none"> <li>Regular inspections to ensure compliance with specifications.</li> <li>Mock-ups of key elements for client approval before full installation.</li> </ul>	
5.1.	Documentation	As-built drawings and operation manuals to be provided upon project completion.	
5.2.	Relocation of Consolidation Server	Relocation of Consolidation Server from the DDCC to the Data Center	
<b>6.</b>	<b>COMMAND CENTER Expansion   Video Wall Monitor (same brand as currently installed*)</b>		<b>8 Units</b>
6.1.	Screen Size*	55"	
6.2.	Panel Technology	IPS	
6.3.	Back Light Type	Direct	
6.4.	Aspect Ratio	16:09	
6.5.	Native Resolution*	1,920 x 1,080 (FHD)	

6.6.	Refresh Rate*	60Hz	
6.7.	Brightness(Typ., nit)	500	
6.8.	Contrast Ratio	1,000:1	
6.9.	Dynamic CR	500,000:1	
6.10.	Color Gamut	NTSC 72%	
6.11.	Viewing Angle(H x V)	178 x 178	
6.12.	Color Depth	10bit, 1.07Billion colors	
6.13.	Response Time	8 ms (G to G)	
6.14.	Surface Treatment(Haze )	28%	
6.15.	Life time	60,000Hrs (Typ.) / 50,000Hrs (Min.)	
6.16.	Operation Hours (Hours/Day)	24/7	
6.17.	Portrait / Landscape	Yes / Yes	
6.18.	Input	HDMI 2 (HDCP 2.2), DP (HDCP 2.2), DVI-D (HDCP 1.4), Audio In, RS-232C In, RJ45 (LAN), IR In, USB 2.0 Type A	
6.19.	Output	DP Out (Input : HDMI / DVI / DP), Audio Out, RS-232C Out, RJ45 (LAN)	
6.20.	Bezel Color*	Black	
6.21.	Bezel Width*	B2B : 1.74mm (Panel Bezel to Panel Bezel), 1.3mm(T/L), 0.44mm(B/R) A2A : 2.49mm (Active area to Active area), 1.75mm(T/L), 0.74mm(B/R)	
6.22.	Weight(Head)	18.8 Kg	
6.23.	Packed Weight	31.0 Kg (when individual pallet applied)	
6.24.	Monitor Dimension(W x H x D)	1,212.2 x 683.0 x 86.9 mm	
6.25.	Carton Dimensions(W x H x D) (Box outer size)	1,353 x 855 x 263 mm	
6.26.	Handle	Yes	
6.27.	VESA™ Standard Mount Interface	600 x 400	
6.28.	Internal Memory	8 GB,	
6.29.	Sensor	(Temperature Sensor, BLU Sensor, Acceleration(Gyro) Sensor), Local Key Operation	
6.30.	Software Compatibility*	webOS 4.1, Embedded CMS (Local Contents Scheduling, Group Manager), USB	

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		Plug & Play, Fail Over, Background Image (No Signal Image), Sync Mode (RS-232C Sync, Local Network Sync), Video Tag (4), Play via URL, Rotation (Screen Rotation, External Input Rotation), Gapless Playback, Tile Mode Setting (Max. 15 × 15), Setting Data Cloning, SNMP, ISM Method, Auto Set ID, Status Mailing, Control Manager, 3rd Party Compatibility (Crestron Connected@2)), Power (Smart Energy Saving, PM Mode, Wake on LAN, Network Ready), HDMI-CEC3), SI Server Setting, web RTC, Pro:Idiom, W/B Setting by Grey Scale, Scan Inversion	
6.31.	Operation Temperature	0 °C to 40 °C	
6.32.	Operation Humidity	10% to 80%	
6.33.	Power Supply	AC 100-240V~, 50/60Hz	
6.34.	Power Type	Built-In Power	
6.35.	Minimum Consumption	200 W	
6.36.	Max Consumption	250 W	
6.37.	BTU (British Thermal Unit)	682 BTU/Hr(Typ.), 853 BTU/Hr(Max)	
6.38.	Smart Energy Saving	105 W	
6.39.	DPM	0.5W	
6.40.	Power off	0.5 W	
6.41.	Safety	CB / NRTL	
6.42.	EMC	FCC Class "B" / CE / KC	
6.43.	ErP	Yes (Energy Star 8.0 (EU Only))	
6.44.	OSD	English, French, German, Spanish, Italian, Korean , Chinese(Simplified), Chinese(Original), Portuguese(Brazil), Swedish, Finnish, Norwegian, Danish, Japanese, Russian, Portuguese (Europe), Dutch, Czech, Greek, Turkish, Arabic	
6.45.	ACCESSORY	Remote Controller(include battery 2ea), Power Cord, RS232C cable, Lan cable, DP cable, IR Receiver, Guide Bracket, Screws, Manual	
6.46.	IP Rating	IP5X tested	
6.47.	Videowall Bracket	<ul style="list-style-type: none"> <li>• Push in Pop-out slim wall mount bracket</li> <li>• 6 points micro adjustment function</li> <li>• Material :2mm SPCC</li> </ul>	

		<ul style="list-style-type: none"> <li>• With safe lock system</li> </ul>	
6.48.	Videowall Accessories	<ul style="list-style-type: none"> <li>• Provide additional output cards to expand output capability of existing video controller</li> <li>• Provide additional input cards to expand input capability of existing video controller.</li> <li>• Provide wired HDMI connection of new display screens connecting to the existing video controller.</li> <li>• Provide wired HDMI connection of new workstations connecting to the existing video controller.</li> </ul>	
<b>7.</b>	<b>COMMAND CENTER Expansion   Workstation</b>		<b>4 Units</b>
7.1.	Functional Description	<ul style="list-style-type: none"> <li>• Workstations shall serve as the primary source of the video wall.</li> <li>• Workstation shall be capable of running the multiple application programs.</li> <li>• Workstations shall be capable of display mirroring</li> <li>• One workstation shall be allocated for videowall admin</li> </ul>	
7.2.	<b>CPU Specifications</b>		<b>4 Units</b>
7.2.1.	Form Factor	Tower	
7.2.2.	Processor	i9-12700 12C 2.10G 65W	
7.2.3.	GPU	T1000 4GB 4mDP GFX	
7.2.4.	RAM	32GB (2x16GB) DDR5 4800 UDIMM NECC Mem	
7.2.5.	Operating System	Win 11 Pro 64 DG106	
7.2.6.	Adapter	Mini DP-to-DP Adapter	
7.2.7.	Keyboard	USB	
7.2.8.	Mouse	USB	
7.2.9.	Storage	1TB PCIe 2280 TLC M.2 SSD	
7.2.10.	Warranty	3/3/3 Warranty	
7.2.11.	Office Productivity Software	Microsoft Office lifetime (latest version)	
7.3.	<b>Monitor Specifications</b>		<b>4 Units</b>
7.3.1.	Display size	23.8"	
7.3.2.	Display type	IPS	
7.3.3.	Panel active area(inches)	20.75 x 11.67 in	
7.3.4.	Panel active area(cms)	52.7 x 29.65 cm	
7.3.5.	Brightness	300 nits	

7.3.6.	Pixel Pitch	0.275 mm	
7.3.7.	Input connector	1 VGA; 1 HDMI 1.4 (with HDCP support)	
<b>8.</b>	<b>Desktop UPS</b>		<b>4 Units</b>
8.1.	Functional Description	UPS shall provide power to the workstations in the event of power outages and for protection of ICT equipment against power surges.	
8.2.	Technical Specification	<ul style="list-style-type: none"> <li>• Branded and Brand New</li> <li>• At least 650VA voltage rating</li> <li>• Transfer time: Typical 2--6ms, 1 Oms max</li> <li>• Input                             <ul style="list-style-type: none"> <li>○ Voltage range: 162-290VAC, Single phase</li> <li>○ Frequency range: 50Hz/60Hz automatic identification</li> </ul> </li> <li>• Output                             <ul style="list-style-type: none"> <li>○ Voltage tolerance (Batt. Mode): Simulated sine wave at nominal voltage ±10%</li> <li>○ Frequency range (Batt. Mode): 50Hz/60Hz automatic identification</li> </ul> </li> <li>• System Features                             <ul style="list-style-type: none"> <li>○ Indicators:                                     <ul style="list-style-type: none"> <li>▪ AC Mode: LED lighting</li> <li>▪ Battery Mode: LED lighting</li> <li>▪ Fault Solid: LED lighting</li> </ul> </li> <li>○ Protection:                                     <ul style="list-style-type: none"> <li>▪ Discharge</li> <li>▪ Overload</li> <li>▪ Overcharge protection</li> <li>▪ Fuse Protection: YES</li> </ul> </li> <li>○ At least two (2) years warranty on parts and service</li> <li>○ Brand should be at least twenty (20) years on the market</li> </ul> </li> </ul>	
<b>9.</b>	<b>Command Center Expansion - Workstation Chairs</b>		<b>4 Units</b>
9.1.	Specifications	<ul style="list-style-type: none"> <li>• High-back Leather Ergonomic Chair</li> <li>• 360° swivel</li> <li>• Chrome plated star-base</li> </ul>	
<b>10.</b>	<b>Command Center Video Conferencing Equipment</b>		<b>2 Units</b>
10.1.	Functional Description	Designed to facilitate remote communication by integrating high-quality video and audio capabilities. This equipment shall enable participants in different locations to engage in real-time, virtual face-to-face meetings.	
10.2.	<b>Video Conferencing - Camera</b>		

10.2.1.	Resolution	Minimum 1080p Full HD (1920x1080), 30fps	
10.2.2.	Field of View (FOV)	80 degrees minimum	
10.2.3.	Pan/Tilt/Zoom (PTZ)	10x optical/digital zoom, motorized pan and tilt, with presets	
10.2.4.	Auto Framing	Automatic framing to focus on active speakers or groups	
10.2.5.	Low Light Performance	Integrated low-light correction technology	
10.2.6.	Mounting Options	Wall mount, tripod mount, and ceiling mount options	
<b>10.3.</b>	<b>Video Conferencing - Microphone</b>		
10.3.1.	Microphone Pick-up Range	Minimum 15 feet (4.5 meters)	
10.3.2.	Audio Technology Features	Noise Reduction, Echo Cancellation	
10.3.3.	Connectivity	Bluetooth, Wi-Fi/NFC, USB-C/2.0, 2x Ethernet (10/100/1000 Mbps)	
10.3.4.	Protocols Supported	SIP, Webex, Microsoft Teams, Zoom, Skype for Business	
10.3.5.	Power Supply	Power over Ethernet (PoE)/AC power	
<b>10.4.</b>	<b>Video Conferencing - Speakers</b>		
10.4.1.	Speaker Type	Integrated full-duplex speaker with echo cancellation	
10.4.2.	Audio Output	Minimum 10W RMS output with wideband audio	
10.4.3.	External Speaker Support	Line-out for external speaker connectivity	
<b>11.</b>	<b>EC Side   High End Workstation</b>		<b>60 Units</b>
11.1.	Functional Description	Workstations shall serve repository of EC-specific performance management data, including data from EC SCADA systems and electricity distribution systems and reliability indices.	
11.2.	<b>CPU Specifications</b>		<b>60 Units</b>
11.2.1.	Form Factor	Tower	
11.2.2.	Processor	i9-12700 12C 2.10G 65W	
11.2.3.	GPU	T1000 4GB 4mDP GFX	
11.2.4.	RAM	32GB (2x16GB) DDR5 4800 UDIMM NECC Mem	
11.2.5.	Operating System	Windows 11 Pro 64 DG106	
11.2.6.	Adapter	Mini DP-to-DP Adapter	

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11.2.7.	Keyboard	USB	
11.2.8.	Mouse	USB	
11.2.9.	Storage	1TB PCIe 2280 TLC M.2 SSD	
11.2.10	Warranty	3/3/3 Warranty	
11.2.11	Office Productivity Software	Microsoft Office lifetime (latest version)	
<b>11.3.</b>	<b>Monitor Specifications</b>		<b>60 Units</b>
11.3.1.	Display size	23.8"	
11.3.2.	Display type	IPS	
11.3.3.	Panel active area(inches)	20.75 x 11.67 in	
11.3.4.	Panel active area(cms)	52.7 x 29.65 cm	
11.3.5.	Brightness	300 nits	
11.3.6.	Pixel Pitch	0.275.1.1	
11.3.7.	Input connector	1 VGA; 1 HDMI 1.4 (with HDCP support)	
<b>12.</b>	<b>Workstation Software</b>		<b>60 Units</b>
12.1.	Database Management Systems	Latest version of Microsoft SQL Server 2022, 2019 or higher Latest version of MySQL 8.0 or higher	
12.2.	Anti-Virus Software	Windows Defender (built-in for Windows 11) Clam AV (open-source antivirus)	
<b>13.</b>	<b>Desktop UPS</b>		<b>60 Units</b>
13.1.	Functional Description	<ul style="list-style-type: none"> <li>UPS shall provide power to the workstations in the event of power for protection against power surges of ICT equipment.</li> </ul>	
13.2.	Technical Specification	<ul style="list-style-type: none"> <li>Branded and Brand New</li> <li>At least 650VA voltage rating</li> <li>Transfer time: Typical 2--6ms, 1 Oms max</li> <li>Input                             <ul style="list-style-type: none"> <li>Voltage range: 162-290VAC, Single phase</li> <li>Frequency range: 50Hz/60Hz automatic identification</li> </ul> </li> <li>Output                             <ul style="list-style-type: none"> <li>Voltage tolerance (Batt. Mode): Simulated sine wave at nominal voltage <math>\pm 10\%</math></li> <li>Frequency range (Batt. Mode): 50Hz/60Hz automatic identification</li> </ul> </li> <li>System Features</li> </ul>	



		<ul style="list-style-type: none"> <li>○ Indicators: <ul style="list-style-type: none"> <li>▪ AC Mode: LED lighting</li> <li>▪ Battery Mode: LED lighting</li> <li>▪ Fault Solid: LED lighting</li> </ul> </li> <li>○ Protection: <ul style="list-style-type: none"> <li>▪ Discharge</li> <li>▪ Overload</li> <li>▪ Overcharge protection</li> <li>▪ Fuse Protection: YES</li> </ul> </li> <li>○ At least two (2) years warranty on parts and service</li> <li>○ Brand should be at least twenty (20) years on the market</li> </ul>	
<b>14.</b>	<b>EC Side   Perimeter Firewall</b>		<b>60 Units</b>
14.1.	Appliance based services	The appliance-based security platform should provide Firewall, Application Visibility and Control, Advance Malware Protection, and IPS functionality in a single appliance from day one.	
14.2.	Support for Active-Passive mode	The proposed solution should be capable to do Active-Passive mode.	
14.3.	No. of Ports	The appliance should have at least 8 * 1G RJ45 Gigabit ports	
14.4.	Support for Open Architecture	Proposed Firewall should not be proprietary ASIC based in nature & should be open architecture based on multi-core CPUs to protect & scale against dynamic latest security threats.	
14.5.	Required throughput	Firewall should support 880 Mps of NGFW (FW, AVC and IPS) throughput.	
14.6.	Concurrent sessions supported	Firewall should support at least 100,000 concurrent sessions with application visibility turned on	
14.7.	New connections supported	Firewall should support at least 6,000 new connections per second with application visibility turned on	
14.8.	Support for Access-rules for IPv4, IP v6	Firewall should support creating access rules with IPv4 & IPv6 objects, users/groups, application, geolocation, URL, zones, VLAN, etc	
14.9.	Support for multiple Nat functionalities	Firewall should support Nat66 (IPv6-to-IPv6), Nat 64 (IPv6-to-IPv4) & Nat46 (IPv4-to-IPv6) functionality	
14.10.	Trending capability for	Should have the capability of passively gathering information about virtual machine traffic, network hosts and their activities, such	

	traffic and performance	as operating system, services, open ports, client applications, and vulnerabilities, to assist with multiple activities, such as intrusion event data correlation, elimination of false positives, and policy compliance.	
14.11.	IDS/IPS tuning	Should be capable of dynamically tuning IDS/IPS sensors (e.g., selecting rules, configuring policies, updating policies, etc.) with minimal human intervention.	
14.12.	Automatic inspection for non-standard ports	Should be capable of automatically providing the appropriate inspections and protections for traffic sent over non-standard communications ports.	
14.13.	Support for end point quarantine integration	Should support the capability to quarantine end point by integrating with other security solution like Network Admission Control	
14.14.	Support for NBA Capability	Solution should support full-featured NBA capability to detect threats emerging from inside the network. This includes the ability to establish "normal" traffic baselines through flow analysis techniques (e.g., NetFlow) and the ability to detect deviations from normal baselines.	
14.15.	IP reputation feed provision	The solution must provide IP reputation feed that comprised of several regularly updated collections of poor reputation of IP addresses determined by the proposed security vendor	
14.16.	DNP3 and IEC60873 detectors	The solution should have application detectors for DNP3 and IEC 60870.	
14.17.	Preprocessor for Modbus and DNP3	The solution should provide preprocessors for the Modbus and Distributed Network Protocol (DNP3) SCADA protocols that you can configure.	
14.18.	Anomaly detection, decoding for DNP3 traffic	The DNP3 preprocessor should be able to detect anomalies in DNP3 traffic and decode the DNP3 protocol for processing by the rules engine. It should be able to validate the checksums contained in DNP3 link layer frames.	
14.19.	Support for SHA-256 malware detection	Should support the capability of providing network-based detection of malware by checking the disposition of unknown files using SHA-256 file-hash or signature as they transit the network and capability to do dynamic analysis	

14.20.	Web-based interface	The management platform must be accessible via a web-based interface and ideally with no need for additional client software	
<b>15.</b>	<b>EC Side Audio Conferencing Equipment</b>		<b>60 Units</b>
15.1.	Microphone Pick-up Range	Minimum 15 feet (4.5 meters)	
15.2.	Audio Technology Features	Noise Reduction, Echo Cancellation	
15.3.	Connectivity	Bluetooth, Wi-Fi/NFC, USB-C/2.0, 2x Ethernet (10/100/1000 Mbps)	
15.4.	Protocols Supported	SIP, Webex, Microsoft Teams, Zoom, Skype for Business	
15.15.	Power Supply	Power over Ethernet (PoE)/AC power	

All delivered goods (hardware, software, equipment and materials) shall be subject to technical inspection by the NEA Inspection Committee prior to acceptance and installation or use.

**F. SERVICE ORGANIZATION**

The bidder must submit a profile of the Project Team that will be assigned to deliver and implement this project.

The profile must include curriculum vitae of all project team members with work experience on systems integration relevant to the project scope of work.

The Project Team must include the following key lead team members (with respective roles, required experience profiles and responsibilities).

Member - Role	Responsibilities	Required Experience	No. of Hours
Systems Integration Project Manager (Project Director)	Act as primary interface with respect to this project Work with NEA Project Manager to develop and maintain the Project Plan to include the following major items: project schedule, project milestones, and project assignments and responsibilities including that of NEA, ECs, and implementation partners Establish project administrative and support functions that include project reporting	Must have handled overall management of at least two large projects <b>with team size of at least 50 members and with at least ten years of experience on System Integration Services Projects.</b> involving custom software development, computer hardware	470

	<p>procedures, change control procedures, issue resolution procedures and risk management</p> <p>Conduct meetings to review project plans, status meetings, issue resolution, checkpoint reviews, and post-implementation review</p> <p>Resource acquisition/management</p>	and support services.	
<p>Software Development Team Lead (PMO Manager)</p>	<p>Act as the primary interface between the project technical teams and the Project Manager</p> <p>Coordinate tasks, activities and schedules of the project technical team members</p> <p>Provide technical leadership during requirements, design, program preparation, coding and unit/system testing</p> <p>Conduct internal project technical team meetings</p> <p>Identify and report schedule variances</p> <p>Gather project metrics data</p>	<p>Must have handled software development projects with team size of at least ten members</p>	700
<p>Engineering Lead (Project Analyst)</p>	<p>Technical guidance to the team for the execution of the EC-SCADA interface</p>	<p>Licensed engineer with work experience in information technology and energy/power-related projects</p>	1250
<p>Implementation and Training Manager (Project Quality Analyst)</p>	<p>Analyze and coordinate the project schedule, timeline, procurement, staffing, and budget of the project</p> <p>Lead and guide the work of the project implementation and training team.</p> <p>Serve as a point of contact with NEA counterpart</p>	<p>Must have handled implementation project management of at least one large project <b>with team size of at least twenty members and at least ten years of</b></p>	1250

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	<p>Coordinate with cross-functional teams, including software development, training, and customer support to ensure a cohesive implementation process.</p> <p>Ensure that the project requirements for training are fulfilled and successfully met.</p>	<p><b>experience on similar projects.</b></p>	
<p>Project Assistant</p>	<p>Supports project managers and teams by coordinating project activities, maintaining schedules, and ensuring smooth communication. Key responsibilities include tracking project progress, preparing reports, managing documentation, scheduling meetings, and assisting in resource allocation. Also handle basic data analysis, updates project management tools, and assists with issue resolution to help keep projects on track.</p>	<p>Should have three to five years working experience on an IT project and with fundamental understanding of project management principles and practical experience with common project management tools.</p>	<p>1300</p>

**G. WARRANTY**

All equipment, hardware and off-the-shelf (OTS) software products supplied under this invitation to bid shall be covered by a comprehensive warranty that shall protect the buyer against defects in material, workmanship, and performance of the supplied products (hardware, software and equipment) for a specified period.

1. **Warranty Period:** The minimum warranty period required for the supplied computer hardware, systems software and equipment shall be three (3) years from the date of acceptance by NEA, unless otherwise specified for individual items.
2. **Scope of Warranty:** The warranty for products shall cover all parts, components, and sub-systems of the supplied products. It shall include repair or replacements of defective parts, as well as any necessary labor and transportation costs associated with warranty service.

The winning bidder shall assume full responsibility for the execution of its scope of work and deliverables under this TOR, from the time of project construction commences up to final acceptance by NEA and shall be responsible for any damage or destruction that are caused by its performance of the works except those occasioned by force majeure. The winning bidder shall be fully responsible for the safety, protection, security, and

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convenience of his personnel, third parties and the public at large, as well as the works, equipment, installation and the like to be affected by construction work. During this period, the winning bidder shall undertake the repair works, at his own expense, of any damage to the projects on account of the use of materials of inferior quality within 90 days from the time NEA has issued an order to undertake the repair.

As security for above responsibilities, the winning bidder shall be required to post a warranty security in accordance with the following schedule:

Form of Warranty Security	Amount of Warranty Security (Not less than the required percentage of the Total Contract Price)
a. Cash or Letter of Credit issued by a Universal or Commercial Bank	Five percent (5%)
b. Bank guarantee confirmed by a Universal or Commercial Bank.	Ten percent (10%)
c. Surety bond callable upon demand issued by GSIS or a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security.	Thirty percent (30%)

3. The customized application software program supplied shall likewise be covered by a comprehensive warranty. The warranty shall ensure that the software program functions according to the agreed-upon specifications and is free from defects in design, programming, and performance upon delivery and installation up to acceptance of the customized application software program.

**H. SOFTWARE MAINTENANCE SUPPORT SERVICES**

1. Application software maintenance technical support, bug fixes, software updates, and enhancements to ensure the efficient and reliable operation of the NEA DDCC – EC interface software application for the duration of the deployment to the sixty (60) ECs and a period of ninety (90) days following live implementation at all EC locations. The maintenance support services should cover all aspects necessary to maintain the software’s functionality, performance, and security.
2. The service levels to be provided as part of the application software maintenance and support services should be specified, based on the Service Level Agreement, including response times, resolution times, and availability of support. The service levels should be appropriate to meet the criticality of the software and the needs of NEA DDCC. A clear escalation process for addressing urgent or high-priority issues should also be provided.
3. Bug Fixes and Issue Resolution: Software issues reported by users under the application software maintenance support services shall be addressed within 24 hours. This includes identifying and fixing software bugs, errors, and malfunctions that affect

the software's performance, stability, or functionality. The bidder shall provide a systematic process for reporting and tracking issues, as well as a transparent communication channel for status updates and resolution progress.

4. The bidder shall include proposed costing for a follow-on separate application software maintenance services contract option for the NEA Integrated Dashboard Solution and the NEA DDCC – EC interface software beyond the ninety (90)-day period coverage provided as part of this project.

## I. ACCESSORIES

The winning bidder shall provide modular tables, chairs, lighting fixtures, and all other furniture accessories designed to integrate with the electronic requirements operation of the additional NEA DDCC civil works and equipment included herein.

## J. NEA DDCC – EC INTERFACE SOFTWARE ACCEPTANCE TESTING AND CRITERIA

1. Process: The customized NEA DDCC – EC interface software version to be provided by the winning bidder shall undergo a user acceptance testing process by NEA. The user acceptance testing shall cover the following aspects of the software:
  - a. Functionality: The NEA DDCC - EC interface software shall perform all functions and features as outlined in the agreed-upon requirements and specifications
  - b. Performance: The NEA DDCC - EC interface software shall meet the specified performance metrics and response times under normal operating conditions.
  - c. Compatibility: The NEA DDCC - EC interface software shall be compatible with the designated hardware and operating systems as defined in Section E.
  - d. Defects: The NEA DDCC - EC interface software shall be free from defects that may cause major system errors or crashes, or other system wide malfunctions during normal usage.
2. Documentation: The winning bidder shall ensure that documentation provided for the NEA DDCC - EC interface software shall be accurate, comprehensive, and up-to-date.

## K. EC SCADA & AMI HES API TESTING AND CERTIFICATION CRITERIA

1. Process: The application program interface (API) software to be provided by each EC and AMI Head End System provider shall undergo a testing and certification process by the winning bidder prior to endorsement to NEA for connection to the NEA DDCC. The API testing shall cover the following aspects of the application program interface software:
  - a. Functionality: The application program shall perform all functions and features as outlined in the agreed-upon interface data table requirements and API specifications
  - b. Performance: The application program interfaces shall meet the specified performance metrics and response times under normal operating conditions.

- c. Compatibility: The application program interfaces shall be compatible with the designated hardware and operating systems as defined in the bid documents.
  - d. Defects: The application program interfaces shall be free from defects that may cause errors, crashes, or other malfunctions during normal usage.
2. Documentation: The winning bidder shall review and ensure that documentation provided by ECs with the application program shall be accurate, comprehensive, and up-to-date.

#### **L. HARDWARE & SYSTEM SOFTWARE MAINTENANCE SUPPORT SERVICES**

The bidder shall propose follow on maintenance support services to cover all installed hardware and system software beyond the warranty period. Maintenance includes both scheduled preventive maintenance and unscheduled troubleshooting and repair work. The bidder shall provide a comprehensive plan for a detailed schedule of maintenance of all hardware and software, which shall be included in the Maintenance and Support Plan.

#### **M. TRANSFER OF TECHNOLOGY**

The winning bidder shall conduct trainings for the management and staff of the procuring entity. Training areas should include, but shall not be limited to:

1. Operations trainings for EC System Administrators for all sixty (60) sites at designated training hub locations and/or via virtual online training facilities.
2. Installation, operation and trouble shooting and maintenance of system hardware, network, peripheral and ancillary devices and its related operating systems.
3. Operation, administration, maintenance and trouble-shooting of licensed software products and System.
4. The winning bidder shall provide training manuals in electronic (soft copy) in the English language.
5. The winning bidder shall submit a comprehensive training plan. The plan must list the proposed course content, timing and scheduling requirements, documentation, and other items required to ensure the proper and successful learning of NEA and EC personnel on operations of the proposed system.
6. The winning bidder shall provide NEA a copy of the application program interface software source codes of any customized application software programs developed for the NEA DDCC upon acceptance of the software by NEA.

#### **N. CONFIDENTIALITY OF DATA**

Documentation shall be provided on detailed procedures / techniques in identifying systems security risks and how such shall be handled. The Database Record shall be held in strict confidence and shall not be reproduced, transcribed or disclosed without prior written approval from NEA. The winning bidder and all project staff of the winning bidder assigned to the project shall be required to sign a Non-Disclosure Agreement.



## O. ESTABLISHED LOCAL SUPPORT

The suppliers of the primary hardware and software products proposed by the bidder for the deployment of NEA DDCC solution and hardware must have a branch office in the Philippines duly registered with the SEC/DTI, and should be actively operating.

## P. RESTRICTION ON TURNKEY SUBCONTRACTING

As a turnkey project, the winning bidder shall not subcontract on a full turnkey basis the entire scope of work of this project, or more than twenty percent (20%) of the contract value to a single vendor/supplier/SYSTEMS INTEGRATOR, and shall retain full and single accountability for all deliverables.

## Q. LIQUIDATED DAMAGES

If the winning bidder or supplier/SYSTEMS INTEGRATOR fails to satisfactorily deliver goods under the contract within the specified delivery schedule, inclusive of duly granted time extensions, if any, the supplier/SYSTEMS INTEGRATOR shall be liable for damages for the delay and shall pay the procuring entity liquidated damages an amount equal to one-tenth (1/10) of one percent (1%) of the cost of the delayed goods scheduled for delivery and/or unperformed portion for every day of delay until such goods are finally delivered and accepted by the procuring entity concerned. Such amount shall be deducted from any money due or which may become due to the supplier/SYSTEMS INTEGRATOR, or collected from any securities or warranties posted by the supplier/SYSTEMS INTEGRATOR, whichever is convenient to NEA. In case the total sum of liquidated damages reaches ten percent (10%) of the total contract price, the NEA may rescind the contract and impose appropriate sanctions over and above the liquidated damages to be paid.

## R. PROJECT MANAGEMENT AND IMPLEMENTATION

The project management methodology process to be applied shall be specified, including the timing of project reviews and approvals. At a minimum, the following project plans shall be developed:

1. **Project Management Plan.** This is the controlling document for managing the project in order to provide the deliverables specified in the Contract. It defines the managerial and technical approaches necessary to satisfy the project requirements. The PMP:
  - a. Defines the scope from the contract.
  - b. Provides a summary of the deliverables to be produced.
  - c. Provides full details of organizations, resources, schedules and documentation, plans to manage and control the project.
  - d. Specifies the project monitoring and control process, frequency of status reporting, and other tracking activities.
  - e. Is a working document that shall include the Project Communication Plan used to define communication and interaction between the winning bidder, NEA, ECs, and any/all implementation partners. It provides administrative detail on managing the communication and any third parties.

2. **Project Implementation Plan** (to be integrated into Project Management Plan). The purpose of the plan is to graphically depict the tasks and activities, their duration and resource assignments, and interdependencies. It documents the work breakdown structure. It includes:
  - a. A consolidation of the unique events, activities and steps required to implement the system nationwide. The amount of planning information contained in the individual equipment network, security, interfaces, training and other plans is extensive and requires coordination.
  - b. A framework for the Implementation Manager and project teams to monitor, analyze and coordinate the activities necessary to bring the system operational in all 60 ECs.
  - c. Coordination and tracking of activities to avoid scheduling conflicts, prevent tasks from being overlooked and alert users of schedules so that resource planning can occur.
  - d. "Top-down" planning and the establishment of a critical path for the nationwide implementation.
  - e. Tracking of events so the progress can be measured.
  - f. Identification of issues that cut across the various individual plans.
  - g. A mechanism to identify risks and develop contingency plans to ensure that implementation occurs as planned and on schedule with minimum disruption.
  - h. A mechanism to identify and assign areas of responsibilities for the tasks that need to be completed.
  
3. **Risk Management Plan.** That outlines the strategies and processes for identifying, assessing, managing, and monitoring risks that may affect the success of a project. This is to ensure that potential issues are addressed proactively, minimizing their impact on project objectives, timelines, and budget. This plan serves as a guide to help the project team mitigate risks before they materialize and establish contingency plans to address unforeseen challenges.

## S. SUMMARY OF KEY DELIVERABLES (Further details are provided in Section E)

1. Hardware, software, and equipment on the EC side needed to receive and record data needed by the NEA DDCC from EC SCADA and other in-house systems. This excludes EC SCADA-specific interface protocols software and Application Program Interfaces (APIs) that shall be developed and/or provided by the respective ECs.
2. Detailed System Design Specifications Document that shall include the following:
  - a. Specifications for the interface data tables required by the NEA DDCC from the ECs that shall be sent to the DDCC via Application Program Interfaces (APIs) by the ECs.
  - b. Specifications for the Application Program Interface (API) software that shall be used to send data needed by the NEA DDCC from an Advanced Metering-Infrastructure/Head End System (AMI/HES).

- c. Documentation of the data interface and integration process, including system architecture, interface specifications, and user guides.
- d. Business Process Flow – the business process model collaborating among participating ECs (in diagram and narrative form).
- e. Cyber Security and Data Protection Strategy outlining the policies, procedures, and practices that NEA will follow to ensure the confidentiality, integrity, and availability of its information systems and data
- 3. Training Plan and materials for EC personnel.
- 4. Technical support and maintenance services for the duration of the project contract.
- 5. Audio conferencing equipment at the NEA DDCC and at counterpart EC Command Center locations.
- 6. A Project Management Plan that shall include the following:
  - a. A Project Implementation plan
  - b. Quality Assurance Plan
  - c. Risk Management Plan
- 7. NEA DDCC civil works as specified in Section E of this TOR.

**T. PROJECT SCHEDULE/PAYMENT MILESTONES**

The project shall be paid on the proposed schedule indicated below which shall not exceed the ceiling specified with the submission by the winning bidder of Billing Statements and below-cited documents, and/or other documents that may be required by NEA:

Particular	Required Documents (Deliverables)	Date of Submission	% of Payment
Sign-off of the Project Management Plan (including Project Implementation Plan and NEA DDCC – Phase 2 Detailed System Design Document	1. Project Management Plan and Detailed System Design Document (R.1 & R.2), including: <ul style="list-style-type: none"> <li>a. Project Implementation Plan</li> <li>b. Quality Assurance Plan</li> <li>c. Risk Management Plan</li> <li>d. Cyber Security and Data Protection Strategy</li> </ul> 2. Sales Invoice/s or Billing Statement. 3. Certification issued by the end-user. 4. All documents that may be needed by NEA in support of and related to the Project Management and Detailed System Design Document, if any.	Refer to Gantt Chart	15%

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*Handwritten signatures and initials in blue ink.*

<p>Completion and acceptance of NEA Command Center Phase 2 Expansion Civil Works &amp; Equipment (per Section E of this TOR)</p>	<ol style="list-style-type: none"> <li>1. Delivery Receipt with list and description of delivered items, materials to NEA.</li> <li>2. Sales Invoice/s or Billing Statement</li> <li>3. Inspection &amp; Acceptance Report issued by NEA for completion of NEA Command Center Phase 2 Civil Works as per Section E of this TOR</li> <li>4. Certification from NEA that the Civil Works have been completed.</li> <li>5. Engineering Documents approved</li> </ol>	<p>Refer to Gantt Chart</p>	<p>15%</p>
<p>Delivery and installation of the EC side hardware, system software and NEA DDCC - EC interface software - components to all ECs</p>	<ol style="list-style-type: none"> <li>1. Delivery Receipt/s with a list and description of delivered hardware and software to NEA and EC</li> <li>2. Sales Invoice/s or Billing Statement</li> <li>3. Inspection &amp; Acceptance Report issued by NEA for delivered hardware/ software (prior to installation)</li> <li>4. Certification from NEA and EC that the hardware and software delivered are already installed</li> </ol>	<p>Refer to Gantt Chart</p>	<p>35%</p>
<p>Completion of NEA and EC User Training</p>	<ol style="list-style-type: none"> <li>1. Sales Invoice/s or Billing Statement</li> <li>2. NEA DDCC EC User Training documents (User and System Administration and Training Manual.</li> <li>3. Certification of attendance,</li> <li>4. Certification from NEA/EC for training conducted</li> </ol>	<p>Refer to Gantt Chart</p>	<p>10%</p>
<p>Implementation of NEA DDCC – EC interfaces and completion of Interface - Acceptance Testing</p>	<ol style="list-style-type: none"> <li>1. Sales Invoice/s or Billing Statement</li> <li>2. Certification from NEA and EC that Acceptance Testing of the NEA DDCC – EC</li> </ol>	<p>Refer to Gantt Chart</p>	<p>15%</p>

	<p>interfaces has been completed and that the NEA DDCC – EC interfaces have been implemented at the NEA DDCC and particular EC concerned.</p> <p>3. Source Codes of any customized software developed by the winning bidder.</p> <p>4. Inventory of software license/product key.</p>		
Retention	Written Request from the Winning Bidder		10%
Total			100%

Advance payments, if any, may be made only upon submission by the winning bidder of a written request and an irrevocable letter of credit or bank guarantee issued by a Universal or Commercial Bank. This letter of credit, surely bond or bank guarantee must be equal in value to the advance payment (not to exceed fifteen percent (15%) of the contract) and shall remain valid until the goods are delivered. The advance payment shall be paid within sixty (60) calendar days from signing of the contract.

**U. RESPONSIBILITES OF THE NEA**

1. Provide for temporary facility for the entire project phase. However, the **SYSTEMS INTEGRATOR** shall provide conduits, wires, connections and accessories and other needed equipment.
2. Issue the necessary working permit and/or gate pass to the **SYSTEMS INTEGRATOR**.

**V. RESPONSIBILITIES OF THE SYSTEMS INTEGRATOR**

1. Provide technical supervision, skilled manpower, tools, equipment and suitable highest quality materials.
2. Make sure that the materials and equipment to be delivered, used and installed shall be of highest quality/brand and passed in the inspection by NEA representative/s prior to its usage and/or installation. Same shall be supported by valid documents, i.e. invoice, delivery receipt, etc. from the source suppliers.
3. Ensure that all exposed finished hardware, lighting fixtures and accessories, plumbing fixtures and accessories, glasses and the like shall be adequately protected and not be damaged. Ensure that the performance, appearance and

proper functioning of the NEA building and its facilities shall not be affected by the contracted works.

4. Ensure that all safety requirements, fire extinguishers and all other fire protected equipment in the working areas are provided.
5. Secure and submit all bonds, permits, insurances and other requirements necessary in the implementation of the project and under the law.
6. Ensure the conduct of hauling and disposal of garbage/waste materials is properly.
7. Ensure that all equipment and other deliverables under this Project is properly turned-over to NEA as these are property of NEA. This includes all hardware and software such as but not limited to licenses, fixtures, equipment, proprietorship, if any, and importantly, the source code.

## W. GENERAL REQUIREMENTS

1. The principal features of the work do not, in any way, limit the responsibilities of the **SYSTEMS INTEGRATOR** to the general description of the scope of work. It shall perform all the work fully and make it operational to the intent of the project.
2. The **SYSTEMS INTEGRATOR** shall be responsible for the proper execution and coordination of its work. It shall schedule and program all necessary work activities according to the specified completion period.
3. The **SYSTEMS INTEGRATOR** shall observe the required standards of safety and procedures and that its contract and workers shall be properly insured against all risks. It shall provide/equip of its workers with Personal Protective Equipment (PPE) during the course of construction/installation. They shall observe the **NEA's** house regulations to be issued together with the Work Permit.
4. The **SYSTEMS INTEGRATOR** shall be responsible for securing **NEA** issued work permits and compliance with other **NEA** rules and regulations related to the construction works. All workers/engineers working at the site are required to wear company uniforms and/or company ID.
5. The **SYSTEMS INTEGRATOR** is not allowed to erect quarters for workers within **NEA** premises. **SYSTEMS INTEGRATOR's** workers are limited to the designated working area only. Loitering around and inside the **NEA** premises is not allowed. Any change in schedule or working hours shall be upon request and approval of NEA.
6. The **SYSTEMS INTEGRATOR** shall be responsible for clearing and cleaning of the designated project site for unused materials, left over, and other debris at the site and disposal of the same outside of the **NEA** premises. A daily inspection of the working area shall be conducted by the **SYSTEMS INTEGRATOR** and **NEA's**

authorized representative to ensure that the working and/or storage area assigned to the **SYSTEMS INTEGRATOR** is clean and in order at all times.

7. The **SYSTEMS INTEGRATOR** shall protect adjacent areas against any damage by its employees, or by his/her materials, equipment and tools during the execution of the work. Any damage done by its employee/s shall be repaired at the **SYSTEMS INTEGRATOR**'s expense, without additional compensation beyond the contract.
8. All necessary permits and other requirements shall be secured and for the account of the **SYSTEMS INTEGRATOR**. Said requirements shall be turned-over to **NEA** upon project completion.
9. The **SYSTEMS INTEGRATOR** shall assign a full-time Engineer as Project-In-Charge (PIC) for the project to supervise the required works. The PIC shall be a certified registered Engineer designated for the project by the **SYSTEMS INTEGRATOR**. Said PIC must be the one to report on a weekly basis of the status/progress of the project as agreed during the kick-off meeting and shall be responsible for all coordination works with the **NEA** or its authorized representative/s.
10. All other items of work not specifically mentioned but are necessary to complete the works in accordance with the plans and specifications and other related documents shall be provided by the **SYSTEMS INTEGRATOR** at no additional cost to the **NEA**.
11. The **SYSTEMS INTEGRATOR** should take full responsibility for any liability or damages that may arise from any accidents and/or damage to person(s) and/or **NEA** property due to acts of negligence or fault of **SYSTEMS INTEGRATOR**.

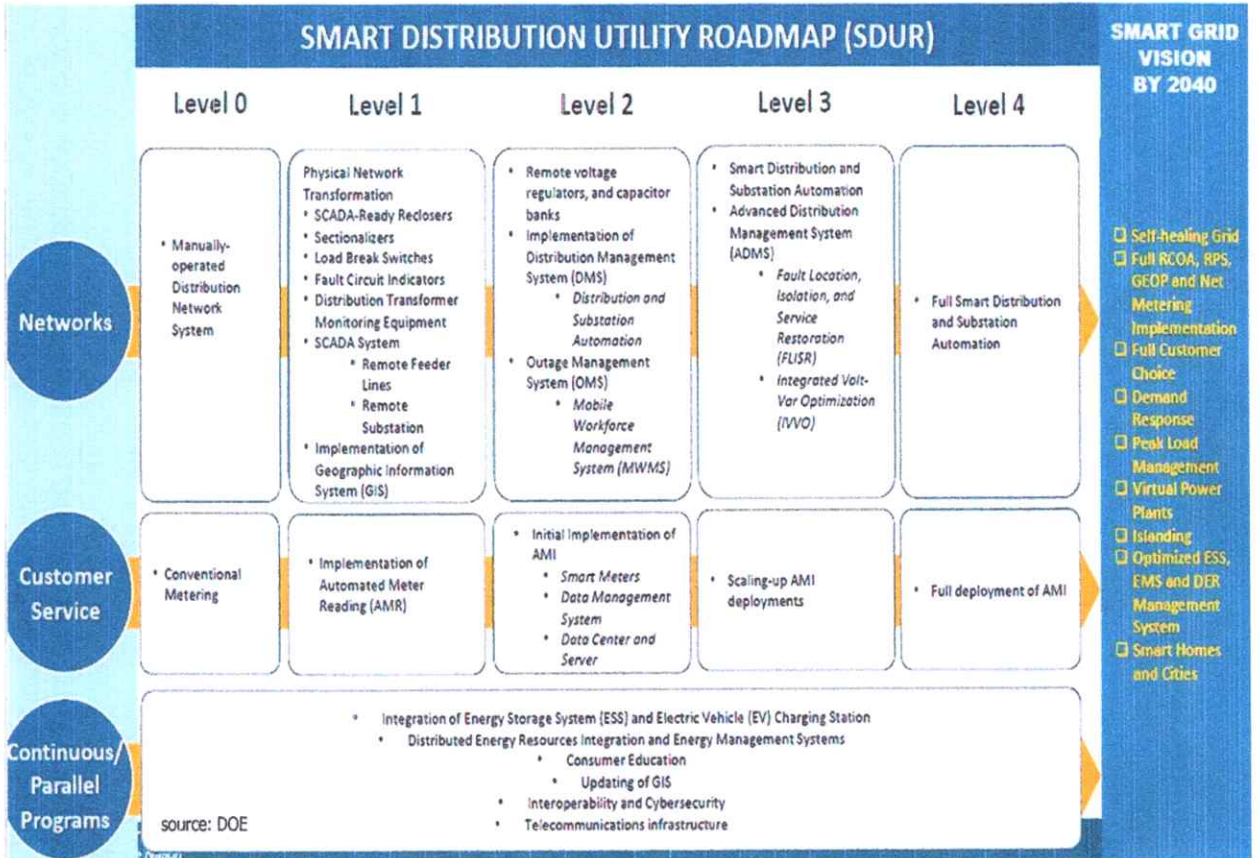
#### **X. SUBMITTALS (BIDDER/S)**

1. Refer to the attached Checklist of Technical and Financial Documents (Appendix "C").
2. Certification(s) of Satisfactory Performance Rating from the client indicated in the SLCC and two (2) past clients.
3. Curriculum Vitae of Project Team.

#### **Y. OTHER CONDITIONS/ PROVISIONS**

It is understood that all other pertinent conditions/ provisions under Republic Act (RA) No. 9184 and its Revised Implementing Rules and Regulations not herein specified and/or not expressly explained shall be deemed incorporated into this TOR with the same meaning as provided under the law.

# APPENDIX A

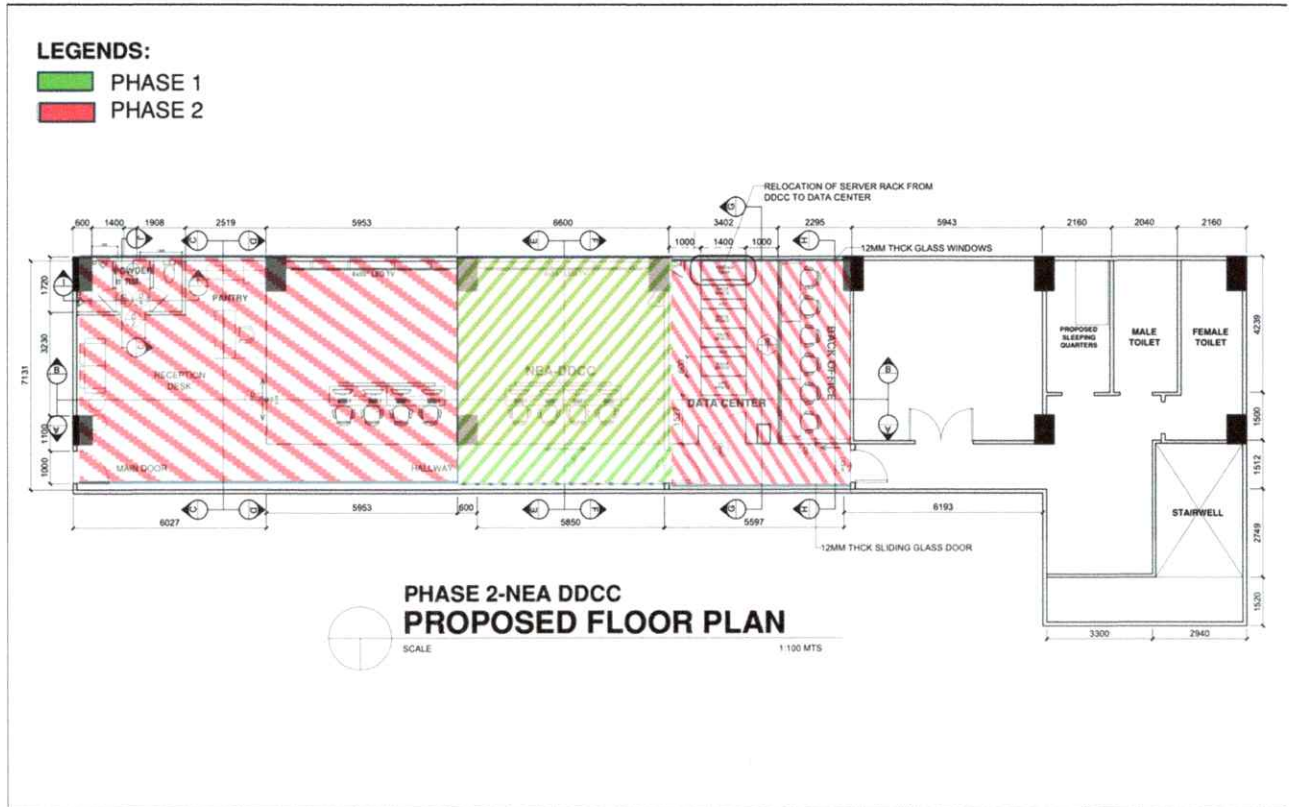


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## APPENDIX B



## **APPENDIX "C"**

# **Checklist of Technical and Financial Documents**

### **I. TECHNICAL COMPONENT ENVELOPE**

#### ***Class "A" Documents***

##### Legal Documents

- (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages) in accordance with Section 8.5.2 of the IRR;
  - a.1. Registration Certificate;
  - a.2. Mayor's/Business Permit or its Equivalent Document;
  - a.3. Tax Clearance

##### Technical Documents

- (b) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**
- (c) Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided for in Sections 23.4.1.3 and 23.4.2.4 of the 2016 revised IRR of RA No. 9184, within ten (10) years as provided in the Bidding Documents; **and**
- (d) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission **or** Original copy of Notarized Bid Securing Declaration; **and**
- (e) Conformity with the Technical Specifications, which may include production/delivery schedule, manpower requirements, and/or after-sales/parts, if applicable; **and**
- (f) Original duly signed Omnibus Sworn Statement (OSS) **and** if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

##### Financial Documents

- (g) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC) **or** a Committed Line of Credit (CLC) from a Universal or Commercial Bank in lieu of its NFCC computation.
- (h) Audited Financial Statements

### ***Class "B" Documents***

- (i) If applicable, a duly signed joint venture agreement (JVA) in case the joint venture is already in existence or duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

#### **II. FINANCIAL COMPONENT ENVELOPE**

- (j) Original of duly signed and accomplished Financial Bid Form; **and**
- (k) Original of duly signed and accomplished Price Schedule(s).

#### *Other documentary requirements under RA No. 9184 (as applicable)*

- (l) *[For foreign bidders claiming by reason of their country's extension of reciprocal rights to Filipinos]* Certification from the relevant government office of their country stating that Filipinos are allowed to participate in government procurement activities for the same item or product.
- (m) Certification from the DTI if the Bidder claims preference as a Domestic Bidder or Domestic Entity.

#### **Other Documents Required by NEA (Item "X")**

1. Certification(s) of Satisfactory Performance Rating from the client indicated in the SLCC and two (2) past clients
2. Curriculum Vitae of Project Team

**Technical Working Group (TWG):**

  
**RODERICK N. PADUA**  
Project Manager

  
**FEDERICO P. VILLAR, JR.**  
Assistant Project Manager

**TIBURCIO P. SANGALANG**  
Member

  
**RAINER NOEL P. RAMOS**  
Member

**RAYMOND M. NAPILOT**  
Member

  
**BONIFACIO T. DAVID**  
Member

  
**MARCIANO C. ANOYA**  
Member

  
**MA. CHONA O. DELA CRUZ**  
Vice-Chairperson

  
**ATTY. ALMIRA MONICA T. LUMBANG**  
Chairperson