UNIVERSITY OF NORTH CAROLINA
CHARLOTTE

STATE OF NORTH CAROLINA

University of North Carolina at Charlotte

Invitation for Bids # 66-25055 JS

AC/DC Grid Emulator

Date Issued: Tuesday, March 25, 2025

Bid Opening Date: Tuesday, April 8, 2025

At 2:00 PM ET

Direct all inquiries concerning this IFB to:

Judy Stanwyck

Senior Buyer

Email: jstanwyc@charlotte.edu

UNIVERSITY OF NORTH CAROLINA
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For internal State agency processing, including tabulation of bids, provide your company's eVP (Electronic Vendor Portal) Number. Pursuant to G.S. 132-1.10(b) this identification number shall not be released to the public. **This page will be removed and shredded, or otherwise kept confidential**, before the procurement file is made available for public inspection.

This page shall be filled out and returned with your bid.
Failure to do so shall be sufficient cause to reject your bid.

_____

Vendor Name

_____

Vendor eVP #

Note: For a contract to be awarded to you, your company (you) must be a North Carolina registered vendor in good standing. You must enter the vendor number assigned through eVP (Electronic Vendor Portal). If you do not have a vendor number, register at https://vendor.ncgov.com/vendor/login

Electronic responses ONLY via eVP will be accepted for this solicitation.

STATE OF NORTH CAROLINA
University of North Carolina at Charlotte

Refer ALL Inquiries regarding this IFB to:	Invitation for Bid # 66-25055 JS
Judy Stanwyck **jstanwyc@charlotte.edu**	**Bids will be accepted until: Tuesday, April 8, 2025 at 2:00 PM ET**

EXECUTION

In compliance with this Invitation for Bids (IFB), and subject to all the conditions herein, the undersigned Vendor offers and agrees to furnish and deliver any or all items upon which prices are bid, at the prices set opposite each item within the time specified herein.

By executing this bid, the undersigned Vendor understands that false certification is a Class I felony and certifies that:

- this bid is submitted competitively and without collusion (G.S. 143-54),
- that none of its officers, directors, or owners of an unincorporated business entity has been convicted of any violations of Chapter 78A of the General Statutes, the Securities Act of 1933, or the Securities Exchange Act of 1934 (G.S. 143-59.2), and
- it is not an ineligible Vendor as set forth in G.S. 143-59.1.

Furthermore, by executing this bid, the undersigned certifies to the best of Vendor's knowledge and belief, that:

- it and its principals are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal or State department or agency.

As required by G.S. 143-48.5, the undersigned Vendor certifies that it, and each of its sub-Contractors for any Contract awarded as a result of this IFB, complies with the requirements of Article 2 of Chapter 64 of the NC General Statutes, including the requirement for each employer with more than 25 employees in North Carolina to verify the work authorization of its employees through the federal E-Verify system.

As required by Executive Order 24 (2017), the undersigned vendor certifies will comply with all Federal and State requirements concerning fair employment and that it does not and will not discriminate, harass, or retaliate against any employee in connection with performance of any Contract arising from this solicitation.

G.S. 133-32 and Executive Order 24 (2009) prohibit the offer to, or acceptance by, any State Employee associated with the preparing plans, specifications, estimates for public Contract; or awarding or administering public Contracts; or inspecting or supervising delivery of the public Contract of any gift from anyone with a Contract with the State, or from any person seeking to do business with the State. By execution of this bid response to the IFB, the undersigned certifies, for Vendor's entire organization and its employees or agents, that Vendor are not aware that any such gift has been offered, accepted, or promised by any employees or agents of Vendor's organization.

By executing this bid, Vendor certifies that it has read and agreed to the **INSTRUCTION TO VENDORS** and the **NORTH CAROLINA GENERAL TERMS AND CONDITIONS incorporated herein**. These documents can be accessed from the ATTACHMENTS page within this document.

Failure to execute/sign bid prior to submittal may render bid invalid and it MAY BE REJECTED.

Late bids CANNOT and will NOT be accepted.

COMPLETE/FORMAL NAME OF VENDOR:		
STREET ADDRESS:		P.O. BOX:
CITY, STATE & ZIP:		TELEPHONE NUMBER:
PRINCIPAL PLACE OF BUSINESS ADDRESS IF DIFFERENT FROM ABOVE (SEE INSTRUCTIONS TO VENDORS ITEM #21):		
NAME OF PERSON SIGNING ON BEHALF OF VENDOR:		TITLE
VENDOR'S AUTHORIZED SIGNATURE:	**DATE:**	E-MAIL:

VALIDITY PERIOD

Offer shall be valid for at least sixty (60) days from date of bid opening, unless otherwise stated here: _____ days, or if extended by mutual agreement of the parties. Any withdrawal of this offer shall be made in writing, effective upon receipt by the agency issuing this IFB.

BID ACCEPTANCE

If your bid is accepted, all provisions of this IFB, along with the written results of any negotiations, shall constitute the written agreement between the parties ("Contract"). The NORTH CAROLINA GENERAL TERMS AND CONDITIONS are incorporated herein and shall apply. Depending upon the Goods or Services being offered, other terms and conditions may apply, as mutually agreed.

FOR STATE USE ONLY: Offer accepted and Contract awarded this ____ day of _____, 2025, as indicated on the attached certification, by _____

(Authorized Representative of UNC Charlotte)

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1.0 PURPOSE AND BACKGROUND

The intent of this solicitation is to purchase an AC/DC Grid Emulator for research and development of grid enhancing technologies. The preferred solution will be modular and scalable in respect to power as well as source/load configuration. The grid emulator must support power regeneration capability and be fully bi-directional. AC and DC Grid emulation is required; however, this capability can be supported by dedicated module for either mode. Operation of the modular systems should be supported by a user configurable remote HMI.

Delivery must be completed by June 15, 2025.

2.0 GENERAL INFORMATION

2.1 INVITATION FOR BID DOCUMENT

The IFB is comprised of the base IFB document, any attachments, and any addenda released before Contract award, which are incorporated herein by reference.

2.2 E-PROCUREMENT

ATTENTION: NC E-Procurement does NOT apply to this solicitation and the paragraph entitled ELECTRONIC PROCUREMENT of the North Carolina General Terms and Conditions does NOT apply.

2.3 NOTICE TO VENDORS REGARDING IFB TERMS AND CONDITIONS

It shall be the Vendor's responsibility to read the Instructions to Vendors, the North Carolina General Terms and Conditions, all relevant exhibits and attachments, and any other components made a part of this IFB and comply with all requirements and specifications herein. Vendors also are responsible for obtaining and complying with all Addenda and other changes that may be issued in connection with this IFB.

If Vendors have questions or issues, or exceptions regarding any component within this IFB, those must be submitted as questions in accordance with the instructions in the BID QUESTIONS Section. If the State determines that any changes will be made as a result of the questions asked, then such decisions will be communicated in the form of an IFB addendum. The State may also elect to leave open the possibility for later negotiation of specific provisions of the Contract that have been addressed during the question-and-answer period, prior to contact award.

Other than through this process or negotiation under 01 NCAC 05B.0503, the State rejects and will not be required to evaluate or consider any additional or modified terms and conditions submitted with Vendor's bid. This applies to any language appearing in or attached to the document as part of the Vendor's bid that purports to vary any terms and conditions or Vendors' instructions herein or to render the bid non-binding or subject to further negotiation. Vendor's bid shall constitute a firm offer that shall be held open for the period required herein ("Validity Period" above).

The State may exercise its discretion to consider Vendor proposed modifications. By execution and delivery of this IFB Response, the Vendor agrees that any additional or modified terms and conditions, whether submitted purposely or inadvertently, shall have no force or effect, and will be disregarded unless expressly agreed upon through negotiations and incorporated by way of a Best and Final Offer (BAFO). Noncompliance with, or any attempt to alter or delete, this paragraph shall constitute sufficient grounds to reject Vendor's bid as nonresponsive.

2.4 IFB SCHEDULE

The table below shows the **intended** schedule for this IFB. The State will make every effort to adhere to this schedule.

Event	Responsibility	Date and Time
Issue IFB	State	Tuesday, March 25, 2025
Submit Written Questions	Vendor	Monday, March 31, 2025, by 12:00 PM ET
Provide Responses to Questions	State	Wednesday, April 2, 2025
Submit Bids	Vendor	Tuesday, April 8, 2025, by 2:00 PM ET
Contract Award	State	TBD

2.5 RESERVED

2.6 BID QUESTIONS

Upon review of the IFB documents, Vendors may have questions to clarify or interpret the IFB in order to submit the best bid possible. To accommodate the Bid Questions process, Vendors shall submit any such questions by the "Submit Written Questions" date and time provided in the IFB SCHEDULE Section above, unless modified by Addendum.

Written questions shall be e-mailed to jstanwyc@charlotte.edu by the date and time specified above. Vendors will enter "IFB # 66-25055 JS: Questions" as the subject for the email. Question submittals will include a reference to the applicable IFB section.

Questions received prior to the submission deadline date, the State's response, and any additional terms deemed necessary by the State will be posted in the form of an addendum to the electronic Vendor Portal (eVP), https://evp.nc.gov, and shall become an Addendum to this IFB. No information, instruction or advice provided orally or informally by any State personnel, whether made in response to a question or otherwise in connection with this IFB, shall be considered authoritative or binding. Vendors shall rely *only* on written material contained in an Addendum to this IFB.

2.7 BID SUBMITTAL

IMPORTANT NOTE: This is an absolute requirement. Vendor shall bear the risk of late submission due to unintended or unanticipated delay, or technical issue. It is the Vendor's sole responsibility to ensure its bid has been received via the eVP as described in this IFB by the specified time and date of opening. The date and time of receipt will be electronically time stamped by the system when received. Any bid or portion thereof received or attempted to be submitted after the bid submission deadline will be rejected.

Attempts to submit a bid via mail, courier, facsimile (FAX) machine, telephone or email in response to this IFB shall NOT be accepted.

All bids shall be submitted electronically via the electronic Vendor Portal (eVP). Additional information can be found at the eVP updates for Vendors link: https://eprocurement.nc.gov/news-events/evp-updates-vendors. Bids will ONLY be accepted through the eVP and will NOT be accepted in any other format, including, but not limited to, email, facsimile, USPS, or courier.

Failure to submit a bid in strict accordance with these instructions shall constitute sufficient cause to reject a Vendor's bid(s). Vendors are strongly encouraged to allow sufficient time to upload bids.

Critical updated information may be included in Addenda to this IFB. It is important that all Vendors responding to this IFB periodically check the State's eVP website for any Addenda that may be issued prior to the bid opening date. All Vendors shall be deemed to have read and understood all information in this IFB and all Addenda thereto.

2.8 BID CONTENTS

Vendors shall populate all attachments of this IFB that require the Vendor to provide information and include an authorized signature where required. Failure to provide all required items, or Vendor's submission of incomplete items, may result in the State rejecting Vendor's bid, in the State's sole discretion

Vendor IFB responses shall include the following items and attachments:

a) Cover Letter, which must contain all of the following; (i) a statement that confirms that the Vendor has read the IFB in its entirety, including all links, and all Addenda released in conjunction with the IFB; (ii) a statement that the Vendor agrees to perform in accordance with the scope of work, requirements, and specifications contained herein; (iii) Vendor's agreement to comply with all instructions, terms and conditions, and attachments; and (iv) contact information for Vendor's representative responsible for this IFB.

b) Completed and signed version of EXECUTION PAGES, and completed version of any pages requiring vendor input.

c) Signed receipt pages of any addenda released in conjunction with this IFB, if required to be returned.

d) Completed version of ATTACHMENT A: PRICING

e) Completed version of ATTACHMENT D: HUB SUPPLEMENTAL VENDOR INFORMATION

f) Completed version of ATTACHMENT E: CUSTOMER REFERENCE FORM

g) Completed version of ATTACHMENT F: LOCATION OF WORKERS UTILIZED BY VENDOR

h) Completed and signed version of ATTACHMENT G: CERTIFICATION OF FINANCIAL CONDITION

i) Completed and signed version of ATTACHMENT H: VENDOR REQUEST FOR EO50 PRICE-MATCHING, if applicable

j) Completed and signed version of CERTIFICATION FOR CONTRACTS, GRANTS, LOANS, AND COOPERATIVE AGREEMENTS and OMB STANDARD FORM LLL

2.9 ALTERNATE BIDS

Unless provided otherwise in this IFB, Vendor may submit alternate bids for comparable Goods, various methods or levels of Service(s), or that propose different options. Alternate bids must specifically identify the IFB requirements and advantage(s) addressed by the alternate bid. Any alternate bid, in addition to the marking described above, must be clearly marked with the legend: "Alternate Bid #66-25055 JS [for 'name of Vendor']". Each bid must be for a specific set of Goods and Services and must include specific pricing. If a Vendor chooses to respond with various offerings, each must be offered with a separate price and be contained in a separate bid. Each bid must be complete and independent of other bids offered.

2.10 DEFINITIONS, ACRONYMS, AND ABBREVIATIONS

Relevant definitions for this IFB are provided in 01 NCAC 05A .0112 and in the Instructions to Vendors referenced below which are incorporated herein by this reference.

3.0 METHOD OF AWARD AND BID EVALUATION PROCESS

3.1 METHOD OF AWARD

North Carolina G.S. 143-52 provides a general list of criteria the State shall use to award contracts, as supplemented by the additional criteria herein. The Goods or Services being procured shall dictate the application and order of criteria; however, all award decisions shall be in the State's best interest.

All responsive bids will be reviewed, and award or awards will be based on the responsive bid(s) offering the lowest price that meets the specifications to include any required verifications set out herein such as but not limited to past performance, references, and financial documents.

While the intent of this IFB is to award a Contract to a single Vendor for all line items/portions, the State reserves the right to make separate awards to different Vendors for one or more line items/portions, to not award one or more line items/portions, or to cancel this IFB in its entirety without awarding a Contract, if it is considered to be most advantageous to the State to do so.

If a Vendor selected for award is determined by the State to be a non-resident of North Carolina, all responsive bids will be reviewed to determine if any of them were submitted by a North Carolina resident Vendor who requested an opportunity to match the price of the winning bid, pursuant to Executive Order #50 and G.S. 143-59 (for more information, please refer to ATTACHMENT H: VENDOR REQUEST FOR EXECUTIVE ORDER #50 PRICE MATCHING. If such bid(s) are identified, the State will then determine whether any such bid falls within the price-match range, and, if so, make a Contract award in accordance with the process that implements G.S. 143-59 and Executive Order #50.

The State reserves the right to waive any minor informality or technicality in bids received.

3.2 CONFIDENTIALITY AND PROHIBITED COMMUNICATIONS DURING EVALUATION

While this IFB is under evaluation, the responding Vendor, including any subcontractors and suppliers, is prohibited from engaging in conversations intended to influence the outcome of the evaluation. See the Paragraph 29 of the Instructions To Vendors entitled COMMUNICATIONS BY VENDORS.

Each Vendor submitting a bid to this IFB, including its employees, agents, subcontractors, suppliers, subsidiaries and affiliates, is prohibited from having any communications with any person inside or outside the using agency; issuing agency; other government agency office or body (including the purchaser named above, any department secretary, agency head, members of the General Assembly and Governor's office); or private entity, if the communication refers to the content of Vendor's bid or qualifications, the content of another Vendor's proposal, another Vendor's qualifications or ability to perform a resulting contract, and/or the transmittal of any other communication of information that could be reasonably considered to have the effect of directly or indirectly influencing the evaluation of proposals, the award of a contract, or both.

Any Vendor not in compliance with this provision shall be disqualified from evaluation and award. A Vendor's bid may be disqualified if its subcontractor and/or supplier engage in any of the foregoing communications during the time that the procurement is active (*i.e.*, the issuance date of the procurement until the date of contract award or cancellation of the procurement). Only those discussions, communications or transmittals of information authorized or initiated by the issuing agency for this IFB or inquiries directed to the purchaser named in this IFB regarding requirements of the IFB (prior to proposal submission) or the status of the award (after submission) are excepted from this provision.

3.3 BID EVALUATION PROCESS

Only responsive submissions will be evaluated.

The State will conduct an evaluation of responsive Bids, as follows:

Bids will be received according to the method stated in the Bid Submittal section above.

All bids must be received by the issuing agency not later than the date and time specified in the IFB SCHEDULE Section above, unless modified by Addendum. Vendors are cautioned that this is a request for offers, not an offer or request to contract, and the State reserves the unqualified right to reject any and all offers at any time if such rejection is deemed to be in the best interest of the State.

At the date and time provided in the IFB SCHEDULE Section above, unless modified by Addendum, the bids from each responding Vendor will be accessed via eVP and all offers (except those that have been previously withdrawn, or voided bids) will be tabulated. The tabulation shall be made public as soon as reasonably practical after the date and time of opening. When negotiations after receipt of bids is authorized pursuant to G.S. 143-49 and 01 NCAC 05B.0503, only the names of offerors and the Goods and Services offered shall be tabulated at the time of opening. Interested parties are cautioned that these costs and their components are subject to further evaluation for completeness and correctness and therefore may not be an exact indicator of a Vendor's pricing position.

At their option, the evaluators may request oral presentations or discussions with any or all Vendors for clarification or to amplify the materials presented in any part of the bid. Vendors are cautioned, however, that the evaluators are not required

to request presentations or other clarification—and often do not. Therefore, all bids should be complete and reflect the most favorable terms available from the Vendor. Prices bid cannot be altered or modified as part of a clarification.

Bids will generally be evaluated, based on completeness, content, cost and responsibility of the Vendor to supply the requested Goods and Services. Specific evaluation criteria are listed in Section 3.1 METHOD OF AWARD.

Upon completion of the evaluation process, the State will make Award(s) based on the evaluation and post the award(s) to **the eVP website** under the IFB number for this solicitation. Award of a Contract to one Vendor does not mean that the other bids lacked merit, but that, all factors considered, the selected bid was deemed most advantageous and represented the best value to the State.

The State reserves the right to negotiate with one or more Vendors, or to reject all original offers and negotiate with one or more sources of supply that may be capable of satisfying the requirement, and in either case to require Vendor to submit a Best and Final Offer (BAFO) based on discussions and negotiations with the State.

3.4 PERFORMANCE OUTSIDE THE UNITED STATES

Vendor shall complete ATTACHMENT F: LOCATION OF WORKERS UTILIZED BY VENDOR. In addition to any other evaluation criteria identified in this IFB, the State may also consider, for purposes of evaluating proposed or actual contract performance outside of the United States, how that performance may affect the following factors to ensure that any award will be in the best interest of the State:

a) Total cost to the State
b) Level of quality provided by the Vendor
c) Process and performance capability across multiple jurisdictions
d) Protection of the State's information and intellectual property
e) Availability of pertinent skills
f) Ability to understand the State's business requirements and internal operational culture
g) Particular risk factors such as the security of the State's information technology
h) Relations with citizens and employees
i) Contract enforcement jurisdictional issues

3.5 INTERPRETATION OF TERMS AND PHRASES

This IFB serves two functions: (1) to advise potential Vendors of the parameters of the solution being sought by the State; and (2) to provide (together with other specified documents) the terms of the Contract resulting from this procurement. The use of phrases such as "shall," "must," and "requirements" are intended to create enforceable contract conditions. In determining whether bids should be evaluated or rejected, the State will take into consideration the degree to which Vendors have proposed or failed to propose solutions that will satisfy the State's needs as described in the IFB. Except as specifically stated in the IFB, no one requirement shall automatically disqualify a Vendor from consideration. However, failure to comply with any single requirement may result in the State exercising its discretion to reject a bid in its entirety.

4.0 REQUIREMENTS

This Section lists the requirements related to this IFB. By submitting a bid, the Vendor agrees to meet all stated requirements in this Section, as well as any other specifications, requirements, and terms and conditions stated in this IFB. If a Vendor is unclear about a requirement or specification, or believes a change in a requirement would allow for the State to receive a better bid, the Vendor is encouraged to submit these items in the form of a question during the question and answer period in accordance with the Bid Questions Section above.

4.1 PRICING

Bid price shall constitute the total cost to the State for each item, including all applicable charges for shipping, delivery, handling, administrative and other similar fees. Complete ATTACHMENT A: PRICING FORM and include in Vendor's response.

4.2 RESERVED

4.3 PRODUCT IDENTIFICATION

SUITABILITY FOR INTENDED USE

Vendors are requested to offer only items directly complying with the specifications herein or comparable items which will provide the equivalent capabilities, features and diversity called for herein. The State reserves the right to evaluate all bids for suitability for the required use and to award the one best meeting requirements and considered to be in the State's best interest.

4.4 TRANSPORTATION AND IDENTIFICATION

The Vendor shall deliver Free-On-Board (FOB) Destination to the University with all transportation costs and fees included in the total bid price.

When an order is placed using a purchase order, the purchase order number shall be shown on all packages and shipping manifests to ensure proper identification and payment of invoices. A complete packing list shall accompany each shipment. Vendors shall not ship any products until they have received an order.

4.5 DELIVERY

The Vendor shall deliver Free-On-Board (FOB) Destination to UNC Charlotte's Energy Production and Infrastructure Center (EPIC) department on campus.

Delivery must be completed by June 15, 2025.

4.6 AUTHORIZED RESELLER

The Vendor shall be authorized by the manufacturer to distribute or resell the products and/or maintenance offered in this IFB. The Vendor shall provide a signed statement from the manufacturer confirming authorization upon request from the State. Failure to provide this statement shall constitute sufficient grounds for rejection of Vendor's offer, at the discretion of the State.

Vendor is the: ☐ **Manufacturer** ☐ **Dealer** ☐ **Reseller** ☐ **Distributor**

Authorized: ☐ **Yes** ☐ **No** **Attached Manufacturer's Authority:** ☐ **Yes** ☐ **No**

4.7 WARRANTY

Manufacturer's standard warranty shall apply. Vendors shall include a copy of the manufacturer's standard warranty with the bid response.

The report of a problem does not presuppose that every call must result in an "on-site" visit for service/repair. The Vendor and/or service sub-contractor shall utilize best efforts to resolve problems in a timely fashion by using acceptable servicing methods to include, but not limited to, verbal problem analysis and remote diagnosis. The warranty requirement does not impose any additional duty on the State to make other than normal and good faith problem resolution efforts or expenditures of time. Vendor shall be responsible for compliance with warranty terms by any third-party service provider. Vendor shall provide contact information for warranty service provider, below.

Vendor is authorized by manufacturer to repair equipment offered during the warranty period? ☐ YES ☐ NO

Will the Vendor provide warranty service? ☐ YES ☐ NO, a manufacturer-authorized third party will perform warranty service.

Contact information for warranty service provider:

Company Name: _____

Company Address: _____

_____

Contact Person (name): _____

Contact Person (phone number): _____

Contact Person (email): _____

4.8 MAINTENANCE OPTION

Following expiration of the above warranty, Vendor, or its third-party service provider, shall maintain the system specifications and performance level in accordance with the manufacturer's published specifications and those of this IFB. Maintenance shall include all parts, remedial maintenance labor, travel and living expenses incurred. Except as specifically provided for elsewhere herein, coverage shall be at least for 8:00 am ET to 5:00 pm ET, Monday through Friday, except State recognized holidays and shall include a minimum of two (2) preventive and safety maintenance inspections per year. The State shall have the option to accept the maintenance coverage in this paragraph at the price offered in ATTACHMENT A: PRICING of this IFB, if applicable.

4.9 DESCRIPTIVE LITERATURE

DESCRIPTIVE LITERATURE/CERTIFICATION

Each bid shall be accompanied by complete descriptive literature, specifications, certifications, and all other pertinent data necessary for thorough evaluation of the item(s) offered and sufficient to determine compliance of the item(s) with the specifications. Failure to include such information shall be a sufficient basis for rejection of the bid.

4.10 HUB PARTICIPATION

Pursuant to North Carolina General Statute G.S. 143-48, it is State policy to encourage and promote the use of small, minority, physically handicapped, and women contractors in purchasing Goods and Services. As such, this IFB will serve to identify those Vendors that are minority owned or have a strategic plan to support the State's Historically Underutilized Business program by meeting or exceeding the goal of 10% utilization of diverse firms as 1st or 2nd tier subcontractors. Vendor shall complete ATTACHMENT D: HUB SUPPLEMENTAL VENDOR INFORMATION.

4.11 REFERENCES

Vendors shall provide three (3) references, using ATTACHMENT E: CUSTOMER REFERENCE FORM, for which your company has supplied the equipment offered. The State may contact these users to determine quality level of the offered equipment; as well as, but not limited to user satisfaction with Vendor performance. Information obtained may be considered in the evaluation of the bid.

4.12 VENDOR'S REPRESENTATIONS

If the bid results in an award, Vendor agrees that it will not enter any agreement with a third party that may abridge any rights of the State under the Contract. If any Services, deliverables, functions, or responsibilities not specifically described in this solicitation are required for Vendor's proper performance, provision and delivery of the Service and deliverables under a resulting Contract, or are an inherent part of or necessary sub-task included within such service, they will be deemed to be implied by and included within the scope of the contract to the same extent and in the same manner as if specifically described in the Contract. Unless otherwise expressly provided herein, Vendor will furnish all of its own necessary management, supervision, labor, facilities, furniture, computer and telecommunications equipment, software, supplies and materials necessary for the Vendor to provide and deliver the Services and/or other Deliverables.

4.13 FINANCIAL STABILITY

As a condition of contract award, the Vendor must certify that it has the financial capacity to perform and to continue to perform its obligations under the Contract; that Vendor has no constructive or actual knowledge of an actual or potential legal proceeding being brought against Vendor that could materially adversely affect performance of this Contract; and that entering into this Contract is not prohibited by any contract, or order by any court of competent jurisdiction

Each Vendor shall certify it is financially stable by completing the ATTACHMENT G: CERTIFICATION OF FINANCIAL CONDITION. The State is requiring this certification to minimize potential performance issues from contracting with a Vendor that is financially unstable. This Certification shall be deemed continuing, and from the date of the Certification to the expiration of the Contract, the Vendor shall notify the State within thirty (30) days of any occurrence or condition that materially alters the truth of any statement made in this Certification.

4.14 AGENCY INSURANCE REQUIREMENTS MODIFICATION

A. Default Insurance Coverage from the General Terms and Conditions applicable to this Solicitation:

☐ Small Purchases

☒ Contract value in excess of the Small Purchase threshold, but up to $1,000,000.00

☐ Contract value in excess of $1,000,000.00

4.15 LOBBYING ACTIVITY CERTIFICATION FOR FEDERAL GRANTS

Federal law prohibits recipients of federal funds, whether through grants, contracts, or cooperative agreements, from using those funds to influence or attempt to influence (lobby) a federal official in connection with obtaining, extending, or modifying any federal contract, grant, loan, or cooperative agreement. Further, federal law requires that applicants for federal funds certify:

- that they abide by the above restriction;
- that they disclose any permissible (non-federal) paid lobbying on the Federal Awards being applied for; and
- that such certification requirements will also be included in any subawards meeting the applicable thresholds.

Vendors must complete and submit the CERTIFICATION FOR CONTRACTS, GRANTS, LOANS, AND COOPERATIVE AGREEMENTS and the OMB STANDARD FORM LLL when responding to this solicitation.

5.0 PRODUCT SPECIFICATIONS

5.1 SPECIFICATIONS

The preferred solution will be modular and scalable in respect to power as well as source/load configuration. The grid emulator must support power regeneration capability and be fully bi-directional. AC and DC Grid emulation is required; however, this capability can be supported by dedicated module for either mode. Operation of the modular systems should be supported by a user configurable remote HMI.

The specific items and any specifications that the University is seeking are listed below. Items offered by the Vendor must meet or exceed the listed Specifications for an AC/DC Grid Emulator for research and development of grid enhancing technologies.

AC Output

Modes:	4 Quadrant Grid Forming (voltage Source 4 Quadrant Grid Following (Current Source/Sink)
Configurations:	3-phase AC, 1-phase AC
Minimum Power per Module	50 kVA
Minimum Installed Power	180 kVA (quoted power capacity)
Minimum Power Scalability	500 kVA
Frequency	40-75 hZ
Voltage Range	0-576 VAC L-L
Maximum THD	1% (Resistive load at 480 VAC L-L)
Minimum Load Phase Angle Control	315-45 deg
Harmonic Voltage Injection	up to 25th (minimum)
Harmonic Current Injection	up to 25th (minimum)

DC Output

Modes:	Bi-directional Constant Voltage Source Bi-directional Constant Current Source/Sink
Minimum Power per Module	50 kW
Minimum Installed Power	100 kW
Voltage Range	0-650 VDC

Input Rating:

Voltage:	480 VAC+/-10%
Frequency	60 Hz +/-2%

System Preferences:

The following attributes are preferred in the desired system but not required.

- Power Hardware in the Loop (PHIL) communication interface
- LabVIEW supported user defined control interface
- User defined sub-cycle transients
- Programmable Output Impedance
- Predefined test protocols supporting UL1741SA, IEEE 1547, IEC 612116, IEC61000, Low Voltage Ride Through

5.2 CERTIFICATION AND SAFETY LABELS

All manufactured items and/or fabricated assemblies subject to operation under pressure, operation by connection to an electric source, or operation involving a connection to a manufactured, natural, or LP gas source shall be constructed and approved in a manner acceptable to the appropriate state inspector which customarily requires the label or re-examination listing or identification marking of the appropriate safety standard organization; such as the American Society of Mechanical Engineers for pressure vessels; the Underwriters Laboratories and /or National Electrical Manufacturers' Association for electrically operated assemblies; or the American Gas Association for gas operated assemblies, where such approvals of listings have been established for the type of device offered and furnished. Further, all items furnished shall meet all requirements of the Occupational Safety and Health Act (OSHA), and state and federal requirements relating to clean air and water pollution.

5.3 DEVIATIONS

The nature of all deviations from the Specifications listed herein shall be clearly described by the Vendor. Otherwise, it will be considered that items offered by the Vendor are in strict compliance with the Specifications provided herein, and the successful Vendor shall be required to supply conforming goods. Deviations shall be explained in detail on an attached sheet. However, no implication is made or intended by the State that any deviation will be acceptable. Do not list objections to the North Carolina General Terms and Conditions in this section.

6.0 CONTRACT ADMINISTRATION

6.1 CUSTOMER SERVICE

The Vendor shall be required to designate and make available to the State a contact for customer service. The customer service point of contact shall be the State's point of contact for all customer service-related issues.

Customer Service Point of Contact	
Name:	
Office Phone #:	

Mobile Phone #:	
Email:	

6.2 ACCEPTANCE OF WORK

Performance of the work and delivery of Goods shall be conducted and completed at least in accordance with the Contract requirements and recognized and customarily accepted industry practices. Performance shall be considered complete when the Services or Goods are approved as acceptable by the Contract Administrator.

The State shall have the obligation to notify Vendor, in writing ten (10) calendar days following completion of such work or delivery of a deliverable described in the Contract that it is not acceptable. The notice shall specify in reasonable detail the reason(s) it is unacceptable. Acceptance by the State shall not be unreasonably withheld; but may be conditioned or delayed as required for reasonable review, evaluation, installation, or testing, as applicable to the work or deliverable. Final acceptance is expressly conditioned upon completion of all applicable assessment procedures. Should the work or deliverables fail to meet any specifications, acceptance criteria or otherwise fail to conform to the Contract, the State may exercise any and all rights hereunder, including, for Goods deliverables, such rights provided by the Uniform Commercial Code, as adopted in North Carolina.

6.3 INVOICES

The standard format for invoicing shall be Single Invoices meaning that the Vendor shall provide the University with an invoice for each order. Invoices shall include detailed line item information to allow the University to verify pricing at point of receipt matches the correct price from the original date of order. All payments will be made on Net 30 terms.

INVOICES MAY NOT BE PAID UNTIL AN INSPECTION HAS OCCURRED AND THE GOODS ACCEPTED.

6.4 DISPUTE RESOLUTION

During the performance of the Contract, the Parties agree that it is in their mutual interest to resolve disputes informally. Any claims by the Vendor shall be submitted in writing to the State's Contract Manager for resolution. Any claims by the State shall be submitted in writing to the Vendor's Project Manager for resolution. The Parties shall agree to negotiate in good faith and use all reasonable efforts to resolve such dispute(s).

During the time the Parties are attempting to resolve any dispute, each shall proceed diligently to perform their respective duties and responsibilities under this Contract. The Parties will agree on a reasonable amount of time to resolve a dispute. If a dispute cannot be resolved between the Parties within the agreed upon period, either Party may elect to exercise any other remedies available under the Contract, or at law. This provision, when agreed in the Contract, shall not constitute an agreement by either party to mediate or arbitrate any dispute.

6.5 PRODUCT RECALL

Vendor expressly assumes full responsibility for prompt notification to the Buyer listed on the face of this IFB of any product recall in accordance with the applicable state or federal regulations. The Vendor shall support the State, as necessary, to promptly replace any such products, at no cost to the State.

6.6 CONTRACT CHANGES

Contract changes, if any, over the life of the Contract shall be implemented by contract amendments agreed to in writing by the State and Vendor. Amendments to the contract can only be made through the contract administrator.

7.0 ATTACHMENTS

IMPORTANT NOTICE

RETURN THE REQUIRED ATTACHMENTS WITH YOUR RESPONSE

EACH ATTACHMENT CAN BE ACCESSED FROM THIS LINK:

https://www.doa.nc.gov/divisions/purchase-contract/vendor-forms

ATTACHMENT A: PRICING

Complete and return the Pricing associated with this IFB, which can be found in the table below:

Item	Qty	UOM	Description	Unit Price	Extended Price
1	1	EA	AC/DC Grid Emulator per specifications listed in Section 5.1		
2	1	LOT	Delivery		
				TOTAL (FOB UNCC)	

Delivery is required on or before June 15, 2025.

Please indicate vendor compliance with the delivery date requirement. _____Yes

ATTACHMENT B: INSTRUCTIONS TO VENDORS

The Instructions to Vendors are incorporated herein by this reference.

ATTACHMENT C: NORTH CAROLINA GENERAL TERMS & CONDITIONS

The North Carolina General Terms and Conditions are incorporated herein by this reference.

ATTACHMENT D: HUB SUPPLEMENTAL VENDOR INFORMATION

Complete and return the Historically Underutilized Businesses (HUB) Vendor Information form.

ATTACHMENT E: CUSTOMER REFERENCE FORM

Complete and return the Customer Reference form.

ATTACHMENT F: LOCATION OF WORKERS UTILIZED BY VENDOR

Complete and return the Location of Workers Utilized by Vendor form.

ATTACHMENT G: CERTIFICATION OF FINANCIAL CONDITION

Complete, sign, and return the Certification of Financial Condition form.

ATTACHMENT H: VENDOR REQUEST FOR EO50 PRICE-MATCHING

Complete, sign, and return the Vendor Request for EO50 Price-Matching.

LOBBYING ACTIVITY CERTIFICATION FOR FEDERAL GRANTS

Complete both the Certification for Contracts, Grants, Loans, and Cooperative Agreements and the OMB Standard Form LLL.

***** Failure to Return the Required Attachments May Eliminate Your Response from Further Consideration *****