



# CENTER OF EXCELLENCE FOR ENERGY

## RESEARCH PROGRAM HANDBOOK

**Arizona State University**

**November 2023**



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## I. CONTRACT INFORMATION

<b>Program Name:</b>	Center of Excellence for Energy (COE/E)
<b>Activity Start Date and End Date:</b>	November 22, 2021, and November 9, 2026
<b>Name of Prime Implementing Partner:</b>	Arizona State University
<b>Agreement Number:</b>	72026322CA00001
<b>Name of Subcontractors/Sub awardees:</b>	NONE
<b>Major Counterpart Organizations</b>	Ain Shams University, Mansoura University, and Aswan University
<b>Center Contact information</b>	Director, Dr. Sayfe Kiaei <a href="mailto:COE-Egypt@asu.edu">COE-Egypt@asu.edu</a>



## II. ACRONYMS AND ABBREVIATIONS

AOR	Agreement Officer’s Representative
AU	Aswan University – Egypt
ASU-EG	Ain-Shams University – Egypt
ASU-US	Arizona State University - US
AWP	Annual Work Plan
BOS	Business Operations Specialist
CFP	Call for Proposals
COE/E	Center of Excellence for Energy
E+I	Entrepreneurship and Innovation
EPU	Egyptian Partner University
FSE	Fulton Schools of Engineering at Arizona State University
GOE	Government of Egypt
ICD	In-Country Director
LOP	Life of Project
MEL	Monitoring, Learning, and Evaluation
MOC	Memorandum of Cooperation
MOHESR	Ministry of Higher Education and Scientific Research
MOU	Memorandum of Understanding
MU	Mansoura University – Egypt
PPE	Personal Protective Equipment



### III. COE/E OVERVIEW

Arizona State University (ASU-US) established the Center of Excellence for Energy (COE/E) in Egypt with funding and support from the USAID in November 2021. The Center of Excellence for Energy is a partnership between ASU-US and three Egyptian partner universities (EPUs): Ain Shams University (ASU-EG), Aswan University (AU), and Mansoura University (MU).

The overall goal of the COE/E activity is to substantially improve the capacity of Egypt's higher education institutions to drive public and private sector innovation, modernization, and competitiveness, strengthen government policy to stimulate economic growth, and contribute solutions to Egypt's development challenges in the energy sector. The COE/E project is designed to meet these objectives by strengthening university capacity to deliver relevant, high quality applied research; engaging government stakeholders in dialogue to advance evidence-based policy making; and training highly skilled graduates to meet the evolving needs of industry, government, and their communities. Across all activities, sustainability will be "built-in" from project start-up, ensuring the long-term impact of the center's activities.

Energy is the defining challenge of the 21<sup>st</sup> century. As part of the COE/E, ASU-US and EPU's aim to conduct research in areas that meet Egypt's most critical energy sector needs—such as developing renewable and sustainable energy sources, progressing new technologies to help curb energy demand, studying implications for climate change and the environment, and formulating appropriate and timely policy responses. Research will have a direct impact on Egypt's energy economy, industry, utilities, and workforce.

The COE/E is launching a joint research grant program to support high-quality applied research projects in key energy-related areas. Faculty at Ain Shams University, Aswan University, and Mansoura University are invited to submit proposals in key areas, listed below.

All proposals are required to form partnerships and support from industry, utility companies, the government, and/or civil society for research support, matching funds, and project directions. The support can be in forms of financial support, in-kind, and/or direct technical engagement of industry in the project.



All joint research proposals should have Arizona State University faculty as a Co-PI. Joint research proposals should have plans to develop transformative, multi-disciplinary approaches to energy solutions that will make a significant impact on Egypt's energy sector.

### A. COE/E Strategic Goal

The goal of the USAID Center of Excellence for Energy is to help enable Egypt to become a leader in clean energy generation, technology, and industry in the Middle East, North Africa, and Mediterranean region. The goal is to assist in developing a foundation for sustainable, long-term social and economic development and as a contribution to helping mitigate accelerating regional and global climate change risks and enabling Egypt to adapt and become more resilient to the threat's climate change poses. Key to regional clean energy leadership for Egypt is the creation of a thriving and durable clean energy innovation ecosystem and hub within the Egyptian economy that supports the development and deployment of a wide array of new clean energy industries and technologies by Egyptian industries.

The center will help catalyze, facilitate, and support the creation and growth of a clean energy innovation ecosystem in Egypt through investments in Egyptian universities that build on their strong engineering fundamentals to create world-class programs and thought leadership in energy research, education, and workforce development, as well as industry partnerships and international exchange.

This goal supports Egypt's efforts to advance a clean energy transition, as cited by the UN Development Program:

“Egypt’s energy situation is changing fast. With more than 100 million people and a GDP growth rate of 5.6 percent, the country’s energy demand is ever-increasing. To help meet demand while transitioning towards a sustainable, resilient energy system, over the past decade, Egypt has embarked on an ambitious energy policy reform program, including *a set target to have 40% of its electricity come from renewable energy sources by 2035.*

As part of this, the country is transforming its energy market by investing in energy efficiency that has significantly reduced the sharp spike in

electricity demand, diversifying its energy mix by investing more in alternative renewable energy sources such as solar and wind energy. Both sources offer safer and more pleasant environments for the cities.” [

#### **IV. RESEARCH AREA AND TOPICS**

One of our key goals will be the development of the National Energy Roadmap that can assist in Egypt’s 2035 climate goals. Working with the stakeholders, government, industry, academic, and researchers, we have identified a set of the topics and areas of research. Proposals are required to be within the following areas based on the strategic roadmap and stakeholders’ feedback are:

**1. Analyzing pathways and technical requirements to achieve Egypt's 2035 goals for renewable penetration.**

Modeling and developing tools for the analysis, forecasting, and policy decisions for the Energy generation, distribution, use, and future planning. Analyzing impacts of renewable resources on stability of power system of Egypt.

**2. Energy Efficiency in Buildings**

Empowering Advanced Technologies and Energy Efficient Materials for Enhanced Efficiency in Buildings, Vehicles, Infrastructure Construction and Manufacturing. Smart Metering, High-Efficiency Lighting. Efficient, load-flexible buildings for high ambient temperatures. Smart Building.

**3. Efficient and environmentally friendly waste-to-energy conversion.**

Decarbonizing industrial process heating, integration of Solar and Renewable Energy Sources for Chemical and Environmental Processing in Agriculture and Other Industries

**4. Performance evaluation, reliability evaluation, and monitoring of solar PV modules, systems, and plants.**

Technologies for aging detection, and predictive maintenance of critical power system assets. Toxicity and end-of-life (EOL) evaluation of PV system components, including PV modules.



## **5. Electric vehicle battery chargers, new battery technologies and battery management systems.**

Bidirectional charging systems: Vehicle-to-Grid (V2G), G2V, Vehicle- to-Home. Vehicle-to-load (V2L). Wireless power transfer technologies. Battery recycling supply chain analysis.

## **6. Hydrogen economy as a pathway for decarbonization.**

The cycle includes hydrogen production (green, blue, etc.); hydrogen storage and transportation including different physical and chemical methods (solid state, ammonia, methanol, etc.); fuel cells (electric vehicles, handheld devices, stationary systems, etc.); use of hydrogen in thermal power generation and different chemical industries, etc.

## V. PROPOSAL FORMAT

The proposals must follow the format outlined in the appendix and include all the sections in the template. The proposals should contain the following sections:

### 1. Team Members:

Each proposal should have a team consisting of consisting of the following team members:

- **Principal Investigator (PI):** A designated faculty member who will be responsible for the scientific or technical direction of the project. The PI is responsible for proposal submission and project reporting, and will be responsible and accountable for the proper conduct of the project. *There can be only one PI on a proposal, and the PI is required to be a faculty member at an EPU.*
  - **Co-Principal Investigator (Co-PI):** A designated faculty member working in partnership with the PI in the management, development, and/or execution of the project. *Projects must have one faculty member at ASU-US serving as Co-PI; there can be only one ASU-US Co-PI. Involvement of other Co-PIs from EPUs will be determined by project size.*
  - **Student Research:** Designated postgraduate (PhD, MS) or undergraduate (BS) students who will participate in the research project under the direction of PIs and/or Co-PIs. *Student(s) must be from EPUs or ASU-US; the number of students will depend on project size.*
  - **Rule of non-multiplicity of proposals:** Faculty members from the Egyptian universities can be a PI in only one proposal per grant cycle.
2. **Research areas:** Proposals must be within the listed areas of research (see Research Areas) and clearly identify the proposed research area.
  3. **Impact:** Proposals must have a clear and direct impact on Egypt's energy sector and have this identified in the proposal.

4. **Industry and other partnership:** Strong preference will be given to the proposals that have partnership and support (financial, in-kind, and/or technical) from industry, utility companies, government, and/or Egyptian civil society. Proposals should include a brief section the partnership between the PIs and the partner industry (or industries).
5. **Budget:** The research fund is limited to the budget guidelines provided in the call for proposals.
6. **Intellectual Property:** Project teams will be asked to comply with Intellectual Property and Research Guidelines Statements. Signatures on compliance statements will be required.
7. **Diversity:** COE/E strongly recommends that at least 30% of researchers and students be from underrepresented groups such as women, persons with disabilities, and those from financially disadvantaged backgrounds.

## VI. PROPOSAL REPORTING

Each project will submit bi-annual progress reports and presentation to the COE/E committees. The continuation of selected projects will be contingent upon satisfactory progress and recommendations by the review committee, technical committees, and stakeholders bi-annually. If the project is not making satisfactory progress, it will be terminated.

Once a project is selected for funding, it will be turned over to COE/E Committees of topical experts to help review the progress, timing, budget details, and benchmarks for individual projects. Details of the post funding reviews will be announced later.

## **VII. PROPOSAL REVIEW PROCESS**

The Center of Excellence for Energy (COE/E) will work with the Research and Policy Committee to announce the annual proposal cycle based on the strategic roadmap outcomes. Proposals will be reviewed by 3–5 anonymous peer reviewers confidentially identified by the COE/E. The reviews will be technical in nature and will be conducted by 3–5 anonymous reviewers like the U.S. National Science Foundation (NSF) review process.

COE/E, working with both the Steering, Research and Policy, and technical review Committees will be responsible for overseeing research projects and dissemination of results through stakeholder forums and other convenings. Biannually, the Research and Policy Committee will lead a formal review of funded research projects, and project team members will present their results during the stakeholder forums. The steps for call proposal and review process are as follows:

### **A. Application & Call for Proposals**

The application process is as follows:

- COE/E, working with the Research and Policy Committee, will develop the Call for Proposals (CFP) and announce it to the EPU and ASU-US faculty.
- The deadlines for the proposals are 8 weeks after the announcement.
- The CFP will have the details of proposal format, requirement, deadlines, budget, resume format, etc. The details of the CFP will be outlined in a separate document.
- Faculty teams led by the PIs and Co-PIs will apply directly through the COE's website.

### **B. Evaluation & Selection Process**

The proposal selection process is as follows:

#### **1. Eligibility Screening**

Only the faculty from EPU (ASU-EG, AU, and MU) can submit joint research proposals as the Principal Investigator (PI). Each proposal must involve one ASU-US faculty member as Co-Principal Investigator (Co-PI).

- **Team members:** Each team consists of faculty, researchers, and students from EPU and ASU-US:
  - **PI:** Each proposal must have one PI from an EPU; there must only be one.
  - **Co-PI(s):** Each proposal must have one ASU-US Co-PI. The involvement of other Co-PIs from EPUs, if any, will depend on project size.
  - **Student Researchers:** the number of student researcher(s) involved will depend on project size. Students must be from EPUs.
- **Large Proposals:** Large proposals must include at least one faculty from the other EPU universities.
- **Conflict of Interest:** Individuals with potential for conflict of interest will not be eligible. Conflicts of interest will be determined at the discretion of COE/E. Any faculty with conflict of interest will not be eligible to serve as PIs or Investigators on research proposals. **COE/E committee members are eligible to apply for funding, but cannot be involved in the review or evaluation of proposals.**
- **Research Areas:** Proposals are required to be within the **defined areas of research** outlined on the call for proposals and have clearly identified the research area in the proposal.
- **Diversity:** COE/E encourages at least 30% of researchers and students be from underrepresented groups such as women, persons with disabilities, and those from financially disadvantaged backgrounds.
- **Format:** Proposals should follow the proposal format, and resume format (See Appendix)
- **Industry and other partnership:** All the proposals should have partnership and support (financial, in-kind, and/or technical) from industry, utility companies, government, and/or Egyptian civil society.

- **Impact on the Egyptian energy sector:** All proposals must be showing how the proposal will make an impact in the Egypt's energy sector.
- **Environmental Impact:** Projects that incur large, substantial, and/or significant environmental impact must inform COE/E for further action.

Proposals that do not adhere to eligibility criteria above will not be considered for further evaluation.

## 2. Evaluation Criteria

COE/E will send the proposals to anonymous technical reviewers. Each proposal will be reviewed by at least 3 external anonymous reviewers for technical quality, merits, feasibility, deliverables, deadlines, etc. The evaluation process is based on the following criteria:

- **Technical and intellectual merit:** Proposals will be ranked based on their technical and intellectual merit, including the soundness of scientific basis, potential to advance knowledge and understanding in the field.
- **Impact on the Egyptian energy sector:** Proposals will be evaluated for their fit with the overall strategic goals of the center.
- **Industry and other partnership:** Strong preference will be given to the proposals that have partnership and support (financial, in-kind, and/or technical) from industry, utility companies, government, and/or Egyptian civil society.
- **Feasibility & Testbeds:** Proposals will be judged based on their feasibility, testbeds to prove the concept, intellectual merit, considering the context, timeline, required resources, budget, and other factors.
- **Milestones & Deadlines:** Proposals should include clear and measurable milestones; testbeds, hardware, software, or specific outcomes; and achievable work plans and deadlines.

- **ASU-US Involvement:** Clarity of the plans working with the ASU-PI; extent and quality of interaction, feedback, or support from ASU-US Co-PI
- **Commercial viability:** Proposals will be evaluated on potential commercial viability including return on investment, identification of marketable products, etc.
- **Diversity - Participation of women and underrepresented groups:** COE/E encourages at least 30% of researchers and students be from underrepresented groups such as women, persons with disabilities, and those from financially disadvantaged backgrounds. Preference will be given to proposals involving teams composed of at least 30% women or other researchers from underrepresented groups.

### 3. Evaluation Metric

The proposals will be reviewed and evaluated by anonymous technical reviews in the related areas. The metrics used for the proposal ranking is as follows:

Review Metric	Comments	Score
Technical and intellectual merit	Contains scientific and technical quality leading to new ideas, procedures, and solutions	20
Impact on the Egyptian energy sector	Potential impact of the research on Egypt's energy sector, its energy challenges, and supports the Egypt's 2035 energy roadmap	20
Industry and other partnership	Connects with the private sector to support technology commercialization	10

	Includes substantial involvement of industrial and/or governmental stakeholders.	
Feasibility & Testbeds	Has testbeds to prove the concepts	10
Milestones & Deadlines	Includes clear and measurable milestones; testbeds, hardware, software, or specific outcomes; and achievable work plans and deadlines.	10
ASU-US Involvement	Clarity of the plans working with the ASU-US Co-PI; extent and quality of interaction, feedback, or support from ASU-US Co-PI	10
Commercial Viability	Potential commercial viability including return on investment, identification of marketable products, etc.	10
Diversity	At least 30% of researchers and students be from underrepresented groups such as women, persons with disabilities, and those from financially disadvantaged backgrounds. Preference will be given to proposals involving teams composed of at least 30% women or other researchers from underrepresented groups.	10
<b>Total</b>		<b>100</b>



## **VIII. TECHNICAL EVALUATION**

After screening proposals for eligibility, the COE/E will send proposals to an anonymous technical evaluation committee, composed of experts in relevant fields. Members will be selected by the COE/E. The committee will review all eligible proposals and rank them based solely on technical and intellectual merit. Full rankings for each project will be sent to the COE/E Evaluation Committee.

### **A. COE/E Evaluation**

The COE/E Evaluation Committee will include relevant faculty, researchers, and industry partners from the US and Egypt. After proposals have been ranked on technical and intellectual merit by an anonymous group of experts, the COE/E Evaluation Committee will review proposals in detail and provide rankings of each based on their impact on the Egyptian energy sector, alignment with COE/E goals and overall feasibility.

### **B. Research and Policy Committee Evaluation**

Following the COE/E Evaluation Committee, the COE's Research and Policy Committee will evaluate proposals based on the technical evaluation and COE/E Evaluation Committee scores. Selected semifinalist teams will be invited to present their research proposals to the Committee, who will provide rankings on each proposal.

### **C. Steering Committee Review**

The semifinalist results will be presented to the Steering Committee by the COE/E team and Research and Policy Committee. Qualifying proposal teams may be invited for additional presentations. The Steering Committee will provide high level feedback on each semifinalist, which will be taken into consideration during final selection.

### **D. Final selection**

After all rankings and feedback has been compiled, COE/E will send the recommendations to USAID. USAID will approve the final selection of research proposals. Proposal teams will be notified of selection, and funding will be contingent upon agreement to required terms and conditions.



## **IX. TITLE OF PROPERTY, OWNERSHIP, AND INTELLECTUAL PROPERTY**

Ownership of equipment, supplies, and other property purchased with funds under the award will vest with the PI's institution during the life of the research project.

ASU-US and the PI agree that ownership and other rights to intellectual property made, created, developed or first reduced to practice in the performance of any task as per the research project shall be determined in accordance with United States patent laws, United States copyright laws, and other United States intellectual property laws as stipulated under 2 CFR 200.59, "Definition of Intangible Property":

Intangible property means property having no physical existence, such as trademarks, copyrights, patents and patent applications and property, such as loans, notes and other debt instruments, lease agreements, stock and other instruments of property ownership (whether the property is tangible or intangible). (2 CFR 200.315 "Intangible Property," 2 CFR 200.448 "Intellectual Property" and ADS 318 "Intellectual Property Rights.")

<https://www.usaid.gov/sites/default/files/documents/1876/318.pdf>.

All information, documents, software, reports, data, records, forms, and other materials developed solely by a Party while performing any task as per a research project shall be owned by such Party. All information, documents, software, reports, data, records, forms, and other materials developed jointly by the Parties while performing any task as per a research project shall be owned jointly by the Parties.

Title to Intangible Property (2 CFR 200.315) acquired under any research project vests in the PI subject to the following conditions:

- Use the property for the authorized purposes of the project during the period of performance, or until the property is no longer needed for the purposes of the project.
- Not encumber the property without approval of the Federal awarding agency (USAID) or pass- through entity (ASU-US).

PIs may assert copyright to works created under a collaborative research project under ADS 318 "Intellectual Property Rights." The United States Government reserves a



royalty-free, non-exclusive, and irrevocable right to reproduce, publish, or otherwise use the work for Federal purposes and to authorize others to do so.

## X. ENVIRONMENTAL COMPLIANCE & CHECKLIST

USAID must ensure that environmental factors and values are integrated into the decision-making process to make awards and fund development activities. USAID procedures for reviewing environmental impacts of Agency actions are detailed in Title 22 of the Code of Federal Regulations Part 216 (22 CFR 216). The Foreign Assistance Act of 1961, as amended, Section 117 requires that the impact of USAID's activities on the environment be considered, and that USAID include environmental sustainability as a central consideration in designing and carrying out its development programs. This mandate is codified in Federal Regulations (22 CFR 216) and in USAID's Automated Directives System (ADS) Parts 201.5.10g and 204 (<http://www.usaid.gov/policy/ads/200/>), which, in part, require that the potential environmental impacts of USAID-financed activities are identified prior to a final decision to proceed and that appropriate environmental safeguards are adopted for all activities.

All proposed funded actions in the COE/E funds must undergo an environmental review pursuant 22 CFR 216 and may also be reviewed under the National Environmental Policy Act for USAID funded activities that occur domestically.

*Environmental Assessment:* Projects that result in an adverse environmental impact may require environmental mitigation to compensate for the environmental impact. Environmental mitigation may include measures that protect and enhance the natural and human environment. Monitoring of environmental mitigation measures is required to assess the progress and efficacy of any required environmental mitigation measures.

Projects that (a) incur large, substantial, and/or significant environmental impact; (b) involve the procurement or use of pesticides; and (c) involve genetically modified organisms will undergo supplemental internal environmental assessment. If the proposed activity will have a potential for any environmental impact, please contact the COE/E center at [COE-Egypt@asu.edu](mailto:COE-Egypt@asu.edu).

The winning proposals must sign the environmental impact form and complete the environmental checklist prior to getting the funds.



## **XI. CONFIDENTIALITY, CODE OF ETHICS AND CONFLICTS OF INTEREST**

### **A. Confidentiality**

All proposal materials are the property of the proposers and cannot be shared or otherwise utilized by the reviewers during or after the review process. Members of Project research and steering Committees also cannot share or utilize information, findings, data, or any other product provided to them during the review process. All application and interim materials (materials generated during the project period that have not been published or otherwise released to the public by the researchers) must be kept confidential. Reviewers and members of Project research and steering Committees will certify their willingness to comply with these confidentiality rules before beginning their roles.

### **B. Code of Ethics**

This code establishes the principles of ethics and rules of conduct for COE/E reviewers and evaluators.

### **C. General Principles**

Reviewers and the COE/E research and steering committee members should keep any information regarding the proposal review confidential and follow these guidelines:

- Perform their duties in accordance with the highest ethical and legal standards and to the best of their abilities.
- Practice honesty and integrity in all aspects of their work.
- Work as independent persons. They are deemed to work in a personal capacity and, in performing the work, don't represent any organization.
- In the performance of their duties, reviewers and evaluators shall be discrete with any facts or information of a confidential nature.
- Under no circumstances shall the reviewers and evaluators put themselves in a position of either a morally or peculiarly real, potential, or apparent conflict

between their personal interests and the public interest. COE/E requires reviewers and evaluators to express, in the process, any conflict of interest with specific proposals.

- Reviewers and evaluators shall not (during or after serving their terms) use to their advantage or to the advantage of a third party, any confidential, unpublished, or privileged information, not in the public domain, that were obtained in the performance of their duties. They may not show the contents of proposals or information on proposers to third parties (e.g., colleagues, students, etc.).
- Reviewers and evaluators shall not, under any circumstances, communicate with principal investigators and research teams of the reviewed proposals regarding their proposals.
- Reviewers and evaluators shall refrain from reviewing a proposal if the assigned proposal is deemed to be out of the reviewer/evaluator field of expertise and cannot be refereed professionally.
- Reviewers and evaluators shall be consistent in their evaluation. Both the scaling system and the narrative description should be consistent and reflect a clear opinion of the reviewer/evaluator.
- Reviewers and evaluators shall be politically neutral in carrying out their duties.
- Reviewers and evaluators shall not solicit or accept an unfair favor or advantage for themselves or a third party.
- Evaluators are not allowed to disclose the names of reviewers participating in the review process.

**D. Breach of code of ethics:**

- a. Authority empowered to act shall be to the Director, after consultation with the Steering Committee in case of a breach of the principles of ethics and/or rules of conduct set out in this code.



- b. In case of a breach of ethics and/or rules of conduct set out in this code, the suspected committee members or reviewer/evaluator may be temporarily relieved of his/her duties by the COE/E.
- c. Reviewers/evaluators under suspicion shall be informed in writing by the COE/E of the alleged breach and its relevant sanction.
- d. Each reviewer/evaluator shall sign a confidentiality form and each page of the accompanied code of ethics manuscript.



## **XII. CONFLICTS OF INTEREST**

### **A. Rules**

A key standard for organizational conflict of interest (OCI) is that anyone that designs an activity or develops material that leads "directly and predictably" to research grant scope should not compete to receive a grant, either as a PI or Co-PI. The concern is that anyone whose involvement meets the standard may provide a biased design if one aims to compete and receive the grant. In the process of preparing the research grant scope, the person may also obtain information that would give an unfair competitive advantage over the other competitors for receiving a grant. ASU-US will review when OCI is an issue.

When there is no actual conflict of interest, ASU-US and COE/E must consider the appearance of conflict with persons that might receive funding within the purview of the research grants.

**Any parties with conflict of interest will not be eligible to serve as PIs, Co-PIs, or any other team member on a research project.**

This includes:

- Parties with a direct financial interest in the research topic (e.g., ownership of a private company in this area)
- The Research and Policy Committee members and any other personnel that participated in the development of the Research Grant Call and/or the review or development of the Evaluation and Selection Criteria are not entitled to apply for any research grant.
- Any member of the Research and Policy Committee and the designated subcommittees that will become the Project Advisory committee—who will be involved in the review, evaluation, and selection of successful applications—should recuse themselves from the evaluation and selection process if there is any apparent Conflict of Interest with any applicant.
- Any faculty or other individuals serving as reviewers or that are involved in the evaluation and selection of proposals.



For any potential conflict, please contact COE/E in advance.

## **B. Conflict of interest for reviewers/evaluators**

The following constitutes conflicts of interest for reviewers or evaluators that will disqualify a reviewer from judging some or all proposals, and from serving on a Project Advisory Committee for a particular proposal:

- Listed as a researcher on the proposal
- Immediate family member like brother, sister, son, daughter, husband, wife (applies to all researchers on a proposal)
- Current graduate student advisor
- Current employer or employee
- Current contractor, advisor, or other financial connection
- Currently Co-PI or fellow researcher on a shared grant
- Has a direct financial interest in the research, such as co-ownership of a patent, or direct ownership or ownership of securities or bonds of companies involved in the research

COE/E Committee members may apply for funding, but may not be involved in the review or evaluation of proposals.

Each project team member (e.g., PI, Co-PI, student researcher) must sign the confidentially and conflict of interest form.



### **XIII. DISCLAIMER**

COE/E, as well as the ASU-US and EPU, and the individuals employed by and representing the above, accept no liability of any nature whether resulting from negligence or otherwise caused arising from reliance of any applicant upon the statements contained in any Request for Proposals (RFP) or other web site or physical materials.

COE/E may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this document, including reporting requirements, for example the content, form, and timing of financial reporting.

The issue of an RFP does not imply that the COE/E is bound to select an applicant or to award the funds related to the RFP. COE/E reserves the right to reject all or any of the Proposals. The applicant shall bear all its costs associated with or relating to the preparation and submission of its Proposal. All such costs and expenses will remain with the applicant and COE/E shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by an applicant in preparation or submission of the Proposal, regardless of the conduct or outcome of the Selection Process.



#### XIV. COE RESEARCH AGREEMENT FORM

Each project team member (e.g., PI, Co-PI, students, researchers) must sign bellow.  
Please sign and return this form with the proposal.

I \_\_\_\_\_ agree with all the terms stated in the COE research handbook, including but not limited to eligibility, conflict of interest, confidentiality, ethics code, IP agreement, environmental compliance, and other terms stated in the research handbook.

Name:

Signature: \_\_\_\_\_

Date:



## **XV. APPENDIX - PROPOSAL FORMAT**

All proposals must follow the below format.

### **A. Technical Proposal Format:**

#### **1. Title Page**

**Title**  
**Research Area**

PI

Dr. M., Professor, University, email, Phone:

Co-PI(s):

Dr. X, Y, University, email, Phone:

Industry partners

Eng. Name, contact information

#### **2. Executive summary (one page)**

A major societal challenge in Egypt is to develop renewable energy to replace the gas-generator energy with minimal environmental impact. This proposal will transform the existing electricity generation system towards a sustainable renewable technology



The project will be divided into three major deliverables thrusts and a test bed.  
Etc.....

The test bed will examine implementation of the hybrid hydro-solar energy system for a small house in a village north of Aswan. ....

**(This is only an example)**

**3. Technical contents (Five pages)**

- a. Goals of the project
- b. Technical details

**Research Goal**

**Thrusts / Major technical pillars**

**Testbed / Proof of concept**

**4. Impact**

Impact on Egypt’s energy sector including potential for commercialization (one page)

**5. Deliverables & Milestones (One page)**

- Table with technical deliverables with timelines
- Table with testbeds deliverables (software, hardware, demo) with timelines
- Publications, patents, etc. as the results of this project
- Bi-annual report and PPT presentation to the review board (twice a year)

Deliverables	Goals / Deliverables	Phase I – Jan-June 2023	Phase II – June-Dec 2023	Phase III – Jan-June 2024	Phase IV – June-Dec 2024
Task or Thurs I	X Y Z				

Test II	....				
Testbed					
Testbed					

### 6. References/ bibliography – per IEEE format (One page)

Use IEEE format for bibliography:

1. A 50-V Isolation, 100-MHz, 50-mW Single-Chip Junction Isolated DC-DC Converter with Self-Tuned Maximum Power Transfer Frequency, C. Liu; D. Mandal; Z. Yao; M. Sun; J. Trodden; B. Johnson; S. Kiaei; B. Bakkaloglu, IEEE Transactions on Circuits and Systems II: Express Brief, May 2019

### 7. List of PI, Co-PI(s), students and their expertise and role (one page)

Researcher name / Expertise	Affiliation, Contact information	Role / Deliverables
Dr. Hassan Hafez Power System	ASU-EG, <a href="mailto:hassan@asuedu.eeddr">hassan@asuedu.eeddr</a> Phone: 011....	Efficient development of Green Hydrogen for ....
Dr. Muni Ahmed Climate		
Student Researchers ...		

## 8. Budget (One page) – See the example spread sheet

## 9. Appendix – Resume Format

**Name**

**Current Title**

**Contact information**

**Address**

**Email:**

**Phone number**

### **FIELDS OF SPECIALIZATION**

- Power System ....
- Power Electronics
- Heat transfer
- Climate ...

### **DEGREES**

- **Ph.D.**, Degree (...), School, Graduation Year, Thesis topic
- **M.S.**, Degree (...), School, Graduation Year, Thesis topic
- **B.S.E.E.**, Degree (...), School, Graduation Year,

### **ACADEMIC AND INDUSTRIAL POSITIONS**

**1- Start Date - end date, Position Title, where did you work, .....**

Responsibilities:

- .....
- .....
- .....

**2- Start Date - end date, Position Title, where did you work, .....**

Responsibilities:





- .....
- .....
- .....

**3- Start Date - end date t, Position Title, where did you work, .....**

- Position, Responsibilities:

**RESEARCH PROJECTS**

- Research project, amount, funding agency, date.
- Research project, amount, funding agency, date.
- Research project, amount, funding agency, date.

**CONSULTANT**

- Year, Job title, Location, responsibilities.
- Year, Job title, Location, responsibilities.

**AWARDS**

- IEEE ....
- Awards...

**PROFESSIONAL RECOGNITION**

**PATENTS, PUBLICATIONS**

**Patents & Disclosures**

**Journal Papers**

IEEE format



## Conference Publications

### IEEE format

#### **B. Signed Forms**

Proposals must include:

1. Industry letters of support and collaboration
2. Conflict of interest, Confidentiality, Environmental impact signed forms