

Selection matrix and application form for host-country

Submission form and criteria for applications regarding the hosting of the ECO Clean Energy Centre (CECECO)

The host country of the Secretariat of the **ECO Clean Energy Centre (CECECO)** will be selected in a competitive selection process. Interested Governments are invited to **submit their official applications with Note Verbal to ECO as well as in electronic form by April 15, 2021 to ECO/UNIDO at the following email address: ECO darimov@eco.int and cececo@gn-sec.net**. Applicants are asked to use this form to submit their applications. All applications require relevant national approvals and need to be signed by the authorised body (e.g. Ministry) of the Government. In the covering sheet please include the name of the institution and the lead contact.

Information that is relevant to prospective bidders is available at: <https://www.gn-sec.net/cececo>. It is recommended that potential bidders review this information prior to contacting the tender managers.

Items for Evaluation	Country Response
1. Eligibility of the offer and applicant (yes/no) – Offers which do not meet these requirements will be not further evaluated	
<ul style="list-style-type: none"> • Application form received within the deadline 	Yes, the application form has been sent within the deadline.
<ul style="list-style-type: none"> • Offers submitted by an authorised Ministry of the Government of an ECO Member State (offers need to be officially signed and approved) 	Yes, the offer will be submitted by an authorised Ministry of the Government.
<ul style="list-style-type: none"> • The offer is complete and includes technical and financial information as requested (incl. photos of the offered office space) 	Yes, the completed offer includes technical and financial information.
<ul style="list-style-type: none"> • The offer confirms that the host country agreement can be signed within 6 months and the office space will be made available at latest in four months after the hosting decision. 	The office space will be available at latest in four months after the hosting decision.
2. Proximity of the proposed office space to regional/international air transportation and national/international institutions in the host country (max. 10 points) – please include physical address	<p style="background-color: yellow; margin: 0; padding: 2px;">The considered office is located in the west of Tehran, Shahrak-e-Ghods.</p> <p style="background-color: yellow; margin: 0; padding: 2px;">This section should be completed by Ministry of Foreign Affairs.</p>

- Proximity to airports and number of daily flights to major hubs in ECO Member States and internationally (e.g. Europe, US, Middle East, Asia) ECO headquarters (max. 4 points)
- Proximity to other governmental, diplomatic and international organisations within the host country (max. 4 points)
- Other comparative advantages of the location of the host country and office space. (max. 2 points)

3. Stability and quality of social and communication infrastructure in the host country/location (10 points)

- Political stability (max. 4 points)
- Availability of sufficient social infrastructure (e.g. electricity supply health, education) (max. 2 points)
- Availability of reliable communication and internet infrastructure (max. 2 points)
- Availability of suitable conference facilities and hotels in the host city for ECO operations (max. 2 points)

Niroo Research Institute (NRI) is briefly introduced below.



Introduction to Niroo Research Institute (NRI)

Niroo Research Institute (NRI) is the main research organization in Electric Power industry of Iran, affiliated to the Ministry of Energy (MOE) of I.R. of Iran. NRI has played a leading role in developing new technologies and enhancing knowledge for Electric Power Industry of Iran since started its activities in 1997.

NRI is performing the dual task of meeting the present and future demands of electric power industry, while making a better use of available resources, preserving the environmental and achieve its objectives.

Missions of NRI can be summarized as: Research management, performing cutting edge researches, implementation of strategic and high risk studies, development and implementation of commercialization of research results, accruing new technologies, preparation standards, providing lab services and quality assessment of equipment or products.

In line with its mission and key responsibilities, NRI has taken necessary steps to build required capacities in order to realize scientific and technical map of the country and also strategic plans of MOE of Iran in the fields of Power Generation, Transmission, Distribution and Consumption, and also research management and supporting the establishment of new technical businesses, supporting and funding the research projects.

The main site including buildings and laboratories of this institute are located in the northwest of Tehran, in a block of land with about 140,000 sqm area. Also, NRI manage 8 Educational and research complexes in other provinces of Iran such as Tehran, Isfahan, Fars, Khorasan, Azerbaijan, Kermanshah, Mazandaran and Gilan. Niroo Research Institute (NRI) has been ranked within the 6-10 top Iran research institutes, according to ISC Rankings 2020.

NRI Research activities are carried out in 4 various research centres entitled Power Generation, Power Transmission, Power Distribution and Energy and Environment Research Centres, consisting of 23 technical research departments, using the facilities of 29 advanced laboratories.

Fields of activities and NRI research departments are as follows:

- Power Systems Operation and Planning Research Department
- Transmission Line and Substation Equipment Research Department
- High Voltage Studies Research Department
- Power Electronics Research Department
- Electrical Machines Research Department
- Power Plant Monitoring and Control Research Department
- Electronic and Instrumentation Research Department
- Information and Communication Technology Research Department
- Smart Control Systems Research Department
- Mechanical Rotary Equipment Research Department

- Thermal Cycles and Heat Exchangers Research Department
- Renewable Energy Research Department
- Energy Management Research Department
- Environment Research Department
- Non-Metallic Materials Research Department
- Metallurgy Research Department
- Chemistry and Process Research Department
- Power Industry Structures Research Department
- Energy and Electricity Economics Research Department
- Accounting and Financial Sciences Research Department
- Management and Social Sciences Research Department
- Foresight and Policy Research Department
- Law Research Department

So as a power and energy industry research arm, NRI has expanded its capacity in different areas among which the following areas can be mentioned:

- Research and development by performing major and strategic projects in power and energy industry
- Development of laboratory services in order to respond power and energy industry needs
- Creating capacity to assume management of power and energy industry
- Developing the foundation of innovation in power and energy industry (including progress centre of innovative companies, web portal technology, spiritual property and ...)

Goals

- To solve the country's problems and restrictions in the fields related to the Ministry of Energy duties
- To cooperate with universities, research institutes and administrative organizations in research fields
- To develop the knowledge and technology related to the existing expertise in Ministry of Energy
- To transmit other countries experiences in the field of technology and achieving technical knowledge with the aim of self-sufficiency in relation to the Ministry of Energy's duties and necessities
- To publish different scientific books and research results and utilize the communication technology by establishing wide computer network to achieve the latest technical information in the world

Activities

- Performing basic, applied and developing research projects with the aim of achieving Ministry of Energy technical and required knowledge in the country regarding the stable development
- Recognizing different requirements of considered research plans in different fields of science and research and utilizing the facilities for the sake of planning research projects related to the Ministry of Energy requirements
- Performing necessary activities for the sake of applying research results
- Providing necessary facilities with the related research designs and plans
- Investigating, recognizing and settling the research requirements of Ministry of Energy
- Establishing active and constructive relations with other research and scientific institutes inside and outside the country by holding scientific conferences, exchanging researchers and carrying out joint research projects for achieving to the most recent technology and science in the fields related to NRI objectives and policies
- Establishing logical relations with professional and innovative forces in the country research and scientific centres and providing necessary facilities for the sake of assisting NRI objectives
- Utilizing the latest results of research and scientific progresses for the sake of social, economical and scientific development in order to improve NRI research plans objectives
- Studying and investigating about the construction and providing the technical and basic requirements of Power Plants, Substations, Transmission lines, and other related problems to the Ministry of Energy and companies affiliated to it

NRI International affairs office:

NRI intend to cooperate with foreign research institute toward the internationalization of research and technology development in accordance with mutual interest in undertaking collaboration and for the purpose of establishing academic-industry relationships, and more specifically in order to extend the effective and mutually beneficial cooperation research and technology development in the Electric Power Industry. The areas of cooperation may include any program to promote the above-mentioned goals according to mutual consent, availability of funds and the approval of both parties. Such international programs may include:

- Joint research projects
- Co-funding Projects
- Research Services
- Human resource training and exchange
- Short and long-term scholarships
- Workshops and training courses
- Sharing infrastructures

- Laboratory Services
- Design and Know-how Transfer
- Joint conferences and publications
- Matchmaking between research institutes and industrial companies.

Energy and Environment Research Center

Dependence of socioeconomic growth of country to the exports of fossil fuel supplies, limited amount of these supplies and environmental effects of fossil fuel consumption show the necessity of optimal energy consumption patterns. In this regard, it is necessary to carry out applicable research projects in these fields:

- Optimal and rational use in fossil fuels consumption patterns.
- Increasing renewable and new energies share in total energy consumption due to their high quantitative potential in our country.
- Controlling the water, air and solid pollutants in order to reuse and recycling of wastes

Renewable Energy Research Department

Since 1998, Renewable Energy Department was organized as a section of Energy & Environment Center. Several research projects have been implemented by this department and a number of projects are under investigation and execution

Research Fields:

- Research and investigation on renewable energy conversion systems
- Solar Energy
- Wind Energy
- Biomass Energy
- Geothermal Energy
- Fuel Cell Systems
- Mini & Micro Hydro Power
- Tidal, Wave & Ocean Energies

For instance, according to significant wind energy potential of Iran, development of wind turbine power plants is one of the goals of fifth 5-years program of the country. In order to establish technical knowledge of wind turbine design and domesticate production, the WTTDC was established in 2010 in NRI with following goals:

- Research and development of wind energy converter technologies.
- Increasing competitiveness of wind energy in country energy basket.
- Decreasing the wind energy utilization costs.

- Subsidizing domestic wind turbine industry via developing efficient and economic technologies.
- Technical support for wind energy utilization, especially large wind farms.
- Supporting wind energy industry by means of technical knowledge development and facilitating the export of services and products.

The available services are

- Cooperating in design, manufacturing, technology transfer and domestication of wind turbine and its components.
- Technical support to industries for implementation of mass production lines of wind turbine main parts.
- Holding specialized training courses on wind turbine design technologies.
- Economical and technical studies on capacity, cost, type and class of wind farms in order to decrease the operation costs.

Environment Research Department

Environment Protection Department has started its activities since 1993 with the goal of investigation on Environment impact assessment of IRAN thermal power plants. This department carries out research projects concerning design of pollution control systems in the following fields:

- Power plants air pollution control system
- Wastewater treatment systems, water management and wastewater recovery& reuse in power plants
- Solid waste management and soil pollution control systems
- HSE (Health, Safety and the Environment)
- Emission trading

Energy Management Research Department

The mission of Energy Management Research Department is to do applied research projects on energy planning and energy efficiency in related with energy industry. This department assists customers in developing comprehension solution to meet their diverse needs by providing consulting service in main following fields:

- Load management and energy efficiency
- Energy planning
- Energy efficient systems developing
- Energy economics and Tariffs
- Effects of cultural and behavioral patterns on electricity consumption
- Energy consumption standard and energy efficiency labeling

Energy and Electricity Economics Research Department

Energy and Electricity Economics Research Department was established in Niroo Research Institute since 1994. Energy and Electricity Economics Research Department started its activities for carrying out Interdisciplinary science research activities. This group for doing research activities using different experts in the field of: electrical engineering, industrial engineering, economic, social systems engineering, MBA and economy.

The main activities of this Department can be summarized in the following titles:

- Privatization and Power market
- Power and energy pricing
- Finance and risk management
- Contracts
- Management and Strategic Planning
- Productivity

Fields work of Energy and Electricity Economics Research Department are as follows:

The Power Market

- Design and Simulation Power Market
- The long-term strategic planning in restructured system
- Information Systems
- The participation of market actors
- Dynamic modeling of Power market
- Effect of distributed generation and power market and vice versa
- Technical & Economical feasibility study of distributed generation

Power Pricing

- Electrical and energy pricing
- Ancillary Services pricing
- Determine costs of silencing
- Transmission Pricing
- Determine costs of electricity production in power plants

- pricing of distributed generation

Contracts

- Contracts in the restructured system
- Contracts for power quality
- Contracts and Protocols for connection distributed generation to network

Management and Strategic Planning

- Strategic Planning and Load Management
- Production Planning and Management
- R&D Strategic Planning in the Power industry

Finance and Risk management

- Various types of investments including: foreign investments, private sector, joint venture- domestic and foreign-, Loans from international organizations and ...
- Identification type of risks
- Developing a method for quantifying the risk

Productivity

- Definition of productivity and Efficiency indicators in the production transmission and distribution sectors.
- Calculating productivity and efficiency indicators in the production transmission and distribution sectors.

NRI Reference Labs

NRI has several labs for different areas of research. Here, only two of them will be introduced briefly.

Air & Physical Pollution Laboratory

Air& Physical Pollution Laboratory of Niroo Research Institute is one of the accredited laboratories of Department of Environment in Iran, which is equipped to deliver services according to national and international Standards.

Certification:

- Accredited Certificate of Department of Environment in Iran.
- New certification standard ISO / IEC 17025 (On going)

Scope of Service & Field of Services:

- Flue Gas Analysis: SO₂, CO₂, CO, NO, NO₂, O₂, HC, Particles
- Air Analysis: ,NH₃,Cl₂,H₂S,SO₂, CO, NO₂, PM₁₀, PM_{2.5}, TSP, Particles (0.3-20mm)
- Noise Measurement by Sound Level Meter in 33 frequency band (4HZ-50 kHz)
- Measurement of the Electric & Magnetic fields in power frequency (50/60 HZ)
- Measurement of the Vibration in frequency Band (10Hz-10KHZ)
- Luminous Intensity
- Calibration of Flue gas analyzers and gas detectors.(SO₂, CO, NO₂ , NO)

Other services:

- - measuring of thermodynamics and fluid parameter for performance test and energy management
- - measuring of electrical parameter for energy management
- - professional thermography by infrared vision camera
- - calibration of flue gas analyzer and ambient gas monitoring

Customers:

- Cement Industries
- Pharmaceutical industries
- Petrochemical & oil refinery
- Metals & Aluminium industries
- Power plants & substations & transmission lines companies
- Asphalt factories
- Other industries

Applicable tests & reference standards:

No.	Test	Standard No.	Date of publication
1	Determination of NO, NO ₂ , CO, SO ₂ , O ₂ emissions from stationary combustion Sources.	ASTM D6522 EPA CTM-030	1997
2	Determination of concentration and mass flow rate of particulate material in gas carrying ducts manual gravimetric method	ISO 9096	2003
3	Determination of total suspended particulate matter in the atmosphere	ASTM D4096 EN 12341	1999
4	Measurement of power frequency electric & Magnetic fields from AC power lines	IEEE Std 644	1994
5	Determination of sound power levels of noise sources	ISO 3741	2000
6	Recommendation for lighting of educational establishments	DIN 5035-60	1998
7	Determination of total hydrocarbons in Stack	EPA-CTM030 EPA-625R96	1997
8	Evaluation of human exposure to whole body vibration (10-80 Hz)	ISO-2631	1989
9	Average Velocity in a duct (pitot tube method)	ASTM D3154	1991

Power Plant Performance Test Lab

Performance testing is the single most important test that can present an overall view on efficiency and performance of power plant unit and its components. To determine performance of power plant, accurate measurement of all related parameters is vital. Hence the performance test lab is equipped with state of the art measurement and data acquisition equipment, and coupled with calibration lab, and with experience staff can ensure an accurate and reliable measurement. The main objective of performance testing includes:

- Accepting or rejecting an installed unit based on contract guarantee
- Evaluation of Overhaul effectiveness through comparatives test
- Identifying potential performance losses and their sources

Scope of services:

Performance test of gas turbine, boiler, HRSG, and steam cycle according to relevant standards

Performance test	Relevant Standard	Publishing Year
Fired Steam Generator (Boiler)	ASME PTC 4	2008
Air Heaters	ASME PTC 4.3	1979
HRSG	ASME PTC 4.4	2008
Steam Cycle Steam turbine	ASME PTC 6	2004
Combined Cycle Steam Turbine	ASME PTC 6.2	2004
Gas Turbine	ASME PTC 22	2005
Gas Turbine	ISO 2314	2009

Obtained Certificates:

- Tavanir Certified Lab

Other services:

- Offering any sort of measurement and testing related to performance
- Offering specialized power plant performance and measurement courses

Offering consultation and supervision services

In summary, NRI is a well-known research centre in Iran and it has:

- ***Very good social infrastructure including library, restaurant, visiting doctor and a shopping centre along with so many other social centres such as pool, gym and etc.***
- ***Reliable communication and internet infrastructure including its own Adobe connect membership with capacity of 500 guests.***
- ***Several well-equipped conference rooms and very high quality hotels around the Centre in Tehran.***

Iran as the host Country

To explain more about the host country, Iran is in a good position in terms of political stability among the countries of the Middle East and the Mena region. Among the factors that have led to political stability in Iran are as the following:

- The extent to which the system responds to the legitimate and illegitimate demands of the people
- Interactive behavior
- Anti-poverty policies
- Strong rule of law
- Economic growth and prosperity
- Absence of violence
- The continuity of government
- Avoidance of structural change
- Existence of multiple social characteristics
- Maximum people political participation
- "System efficiency "and" role "Foreign powers" are the factors of this political stability.

Social Infrastructures available in Iran:

Electricity:

- Different kinds of power plants,
- Wind power,
- Renewables plants

Roads and Transport

- Transport services such as Subways, Bus Stations, parks and sidewalks, railways and airport

Supply Health and social care

- Medical Facilities
- Ancillary infrastructure (e.g. offices, car parks, training facilities)

Education

- Schools (Primary and secondary)
- Tertiary Facilities
- Universities
- Residential Student accommodation
- and childcare facilities and other education system

Sports and recreation facilities

- like swimming pool and playgrounds,
- athletic fields

Public Space

- Spaces for enjoying nature
- Community Gardens
- Social activities

Information

- Access to information including services such as internet and libraries and Burial space

Arts & Cultures

- Aspects of a community that have artistic or cultural value such as historic buildings

Corrections and Justice

- Prisons and Court Houses

Civil and Utilities

- Local government Facilities
- Water system and waste water treatment and much more
- Bank, insurance companies

ICT:

- 5G Internet
- Development of digital infrastructure LIKE Cloud services,
- Internet of things ,
- Smartening the schools and offices,
- Connecting a thousand villages to the national information network, development of 4 million VDSL (Very High bit rate digital subscription line),
- One million FTTH ports (Fiber Optic to the door),
- National information network NTP services,
- VDSL development,
- DNS Projects (internet technology to convert domain name to IP address),
- Internet shipping companies, online stores, computer games, VODs are examples of good internet and communication infrastructure in Iran

Hotels:

Hotels in Iran have many facilities including :

- Good access to commercial and office locations,
- Equipped with video projectors,
- the ability to use wireless microphones in all parts of the hall, the command room with the most complete equipment,
- High-speed internet,
- Professional lighting,
- Simultaneous translation equipment,
- Sound mixer, and much more.
- In this way, the hotels have suitable halls for holding seminars and conferences with professional facilities, which has made it suitable for holding international conferences.
- The room is also quiet and equipped with basic facilities. Bathrooms and toilets, telephones, televisions, free internet, a desk or desk, and a safe where you can safely place your work papers, even laundry is important. The name of some of these hotels are as follows:
- Parsian Azadi Hotel, Tehran
- Spinas Palace Hotel , Tehran
- Spinas Hotel, Tehran
- Esteghlal Hotel, Tehran (former Hilton Hotel)
- Laleh International Hotel , Tehran
- Ibis Hotel, Tehran
- Novotel Hotel, Tehran

<p>4. Size and quality of the offered office space at least for ten (10) full-time staff (max. 10 points)</p>	
<ul style="list-style-type: none"> • Provide details on the size and quality features of the offered office space for the ECO Secretariat. Office space shall provide space for 10 full-time staff and should be expandable in the mid-term. Applications need to include photos and the GIS location of the office space. The more m2 the better the offer will be rated. (max. 3 points) • Provide details on the quality of the office space (new or refurbished office space will be rated better). (max. 3 points) • The inclusion of training facilities in the offer is an asset. (2 points) • The location of the office space in a green building integrating renewable energy and energy efficiency elements is an asset. (2 points) 	<p>The office that can be dedicated to ECO clean centre will be more than 50 m2 at the beginning which can increase more with time depending on the number of people and permanent/visiting staffs.</p> <p>The office is a refurbished large room with standard utilities and very good air conditioning system. Large windows in offices, with a nice and beautiful view to the outside, taking advantage of natural light and the feeling of warmth and spaciousness.</p> <p>NRI has also a separate building equipped for the training reasons. For training facility, we will offer :</p> <ul style="list-style-type: none"> ○ An excellent environment for learning in groups ○ Pleasant, airy rooms and large-size rooms designed for lecture-style instruction and training ○ Network of internal instructors and trainers ○ Possibility to use consultant ○ Modern, high-tech equipment <p>NRI Training Office duties</p> <ul style="list-style-type: none"> • Be responsive to the needs of specialized training of power industry • Designing and developing new courses based on educational needs • Training needs assessment, planning and organizing required courses for NRI • Planning and implementation specialized and international courses • Interaction with educational institutions and universities inside and outside country for holding specialized courses and seminars • Planning and implementation of specialized courses • Planning and implementation of specialized courses outside NRI based on the needs of requesting organization or company

5. Scope of cost-coverage of the offered office space (max. 10 points)	
<ul style="list-style-type: none"> Office space shall be provided free of charge. The longer this arrangement will be provided to the Centre, the better the offer will be rated. (max. 3 points) Scope and duration of the covered running costs of the Centre's space (e.g. utilities – such as electricity and water, communication costs – such as internet). (max. 3 points) Training facilities are provided free of charge or at low rates to the centre. (max. 2 points) Office space is expandable in the mid-term (2 points) 	<p>The above-mentioned office belongs to NRI and will be provided free of charge (Obviously, it will be part of in-kind expenses).</p> <p>The space air conditioning, the electric energy for ordinary office purposes, the WIFI internet, and the room services in a normative base can be provided free of charge.</p> <p>Training centre of NRI can be arranged to be used with lower rates for the centre.</p> <p>Depending on the conditions, office space may be expandable in longer terms.</p>
6. Provide office furniture and equipment, inclusive of desks, chairs, computers, audio-visual equipment for presentations, photocopy machine, printers, any other relevant equipment. (max. 10 points)	
<ul style="list-style-type: none"> Provide details of what could be provided: 	Office furniture, whiteboards, air conditioners, printers, photocopy machine, audio-visual equipment for presentations and ...
7. Concessions, duty exemptions and tax exemptions for the centre, staff and their dependents (max. 10 points). The host country will grant CECECO as ECO regional centre, relevant diplomatic privileges and rights.	This section should be completed by Ministry of Foreign Affairs.
<ul style="list-style-type: none"> Confirm exemptions for the operations of the centre (max. 5 points) Confirm diplomatic privileges and rights of the staff of the centre (max. 5 points) 	
8. Demonstrate renewable energy and energy efficiency commitment of the host country/city (20 points)	

<ul style="list-style-type: none"> • Adopted RE targets and policies (max. 5 points) • Adopted EE targets and policies (max. 5 points) • Major RE projects implemented or in the pipeline (max. 5 points) • Major EE projects implemented or in the pipeline (max. 5 points) • Leadership in regional and international RE&EE processes (max. 5 points) 	<p>The government is obliged to increase the share of renewable and clean power plants with the priority of investing in the non-governmental sector (domestic and foreign) with maximum use of domestic capacity to at least 50 percent (55%) of the country's electricity capacity by the end of the program law.</p> <p>Adopted RE targets and policies :</p> <ul style="list-style-type: none"> ▪ Developing renewable energy yearly 1000 MW ▪ Increasing feed in Tarrif Price ▪ Responsibility of renewable energy got concentrated within government <p>In addition, NRI has already several departments with the focus on Renewable Energy and Energy Efficiency with several faculty members and experts graduated from top universities. These groups are also working on different roadmaps and policies and plan for targets regarding RE and EE. Many RE and EE projects have been defined over the past few years including (but not limited to) wind power, solar power, geothermal, synergy between RE and EE, and several other energy management national projects. NRI's department of Energy and Environment is a very well-known reputable centre in Iran.</p>
<p>9. Additional financial or in-kind contributions to the technical operations of the centre (20 points)</p>	<p>The contributions of NRI in operation of the centre will be in the form of in-kind supports as mentioned in articles 3 to 6.</p>
<ul style="list-style-type: none"> • Secondment or cost-coverage for administrative and/or technical staff (max. 5 points) • Financial contribution to the technical program budget of the centre (max. 5 points) • Financial contribution to the administrative budget of the centre (max. 5 points) • Any other additional contribution (max. 5 point) 	