



Request for Proposals (RFP)

Integrating distributed clean energy systems (DES) in Morocco

28 October 2022

1. Context: new systems thinking in producing electricity by 2030

Morocco has a huge natural potential to produce solar, wind and hydropower, and has taken significant steps to realize it. Morocco's national action on climate change dates back to the mid-2000s, when the country made the decision to become a regional leader in clean energy and to push forward massive renewables projects. The country's government bets on major transformations of the sector as a way to be economically competitive in the future, as well as to reduce dependence on fossil fuel imports and ensure security of energy supply.

Integrating distributed, efficient, and intelligent production, to provide access to competitive electricity to territories, cities, communities, and key fundamental economic sectors is at the heart of Morocco's New Development Model (NMD)¹ by 2035, commissioned by His Majesty King Mohammed VI in 2019, comprising interactive energy efficient appliances, distributed renewable energy systems, and whole economy using digital interconnections to advance net-zero by 2050 in line with Morocco's strategic vision of low carbon pathways by 2050². The NMD considers that the eventual migration to mixed centralized-distributed production requires the modernization of the electricity transmission networks towards a network capable of supporting the new renewable inputs, and investments in smart meters or local distribution substations.

Morocco's power grid is planning to transition away from large, centralized power plants to a systemic pathway of reliance on variable generation and distributed energy resources such as renewable energy sources like wind and solar. To realize Morocco's future energy systems that are clean, secure, reliable, safe, and affordable, it is critical to address the challenges of how to scale up the physical size of these new energy systems. Determining how to integrate multiple diverse technologies into one system by incorporating renewable generation storage, massive electrification of end uses and interaction with the grid.

In light of ongoing and profound implications of the global energy crisis on Morocco's financial balance, integrated systems thinking can help the country take strategic advantage of its favorable conditions for both wind and solar, seize tremendous opportunities to reduce fossil fuel imports and therefore decarbonize Morocco's economy faster and cheaper, through energy efficiency and transformative clean energy systems, digitalize, through connecting equipment, buildings, electric mobility, cooking, heating, cooling and energy systems with customers, and democratize, through empowering capacity, inclusive innovation, and equitable private sector participation to include green jobs, enormous emissions reductions to achieve Morocco's climate updated targets stated in its updated NDC by 2030 of more than **52% of renewable installed capacity, to reduce energy consumption by 20% 2030, and 45.5% of emissions reduction**, create green commercial opportunities for SMES in line with the investment charter of the country which highlights the imperative to strengthen the competitiveness of Moroccan companies by taking necessary measures to reform the energy sector and promote the use of renewable energies.

Thanks to its enormous natural resources (sun and wind), DES provide for Morocco unprecedented upscaling opportunities for clean energy policy and inclusive technology innovation and therefore contribute to achieve Morocco's aspirations by 2035 as per to the clean energy pillar of the New Development Model:

- **A decentralized production**, to strengthen the reliability, resilience, balance, and competitiveness of the energy network by supporting **new forms of integrated**

¹ https://www.csmd.ma/documents/Notes_thematiques_projets_et_paris.pdf

² https://unfccc.int/sites/default/files/resource/MAR_LTS_Dec2021.pdf

production with technologies that optimize yields, minimize losses, and capitalize on existing infrastructures,

- **The installation of smart grids** or installations for self-generation of renewable energy sources in industry, agriculture or even the residential sector to make it possible to control the energy consumption of the self-producer and to inject part of surplus in a regulated and adaptable market,
- **A competitive kWh tariff** by deploying several sources of renewable production (wind and PV) and exploring the development of projects, not only within the framework of law 13.09, but also within the framework of self-production law 82.21, with the possibility of integrating a third-party energy partner into the project, specialized in the operation and maintenance of renewable installations.

2. Request for proposals' (RFP) framework and presentation

In response to the aforementioned vision of the NDM, the recommendations and priority actions of the Power Breakthrough³ which Morocco co-chairs⁴ with the UK, and in line with the strategic priorities of the Energy Transition Council (ETC)⁵, **Integrate to Zero**, an initiative supported by **the Climate Emergency Collaboration Group (CECG)**, in collaboration with **Morocco's Super ESCO, the Energy Engineering Company (SIE)** are launching this RFP to select a qualified Moroccan business partner that would provide up to three safe and affordable **clean distributed energy systems for two different customers in the agriculture and agri-food sector** and identify a **sustainable financing model (ideally an ESCO type arrangement)** for the system to be provided to deliver integrated and distributed clean energy systems in Morocco (*a non-exhaustive list of illustrative projects is annexed to this RFP*).

Integrate to Zero (I2Z)⁶ is offering funding to demonstrate how such systems work and to stimulate Morocco's ESCO market by exploring how their financing can be sustainable in different geographic circumstances including Morocco. Such systems would comprise:

- **On site generation**: mainly solar and storage.
- **On site electrification**: electrified on-site energy usage (some of these might already be electrified): water, cooking, heating, cooling, lighting, etc.
- **On road**: electrified transport, for example, an electric 2-wheeler, with a charger installed on-site.
- **On grid**: subject to formal procedures of the regulatory framework, a smart metering and billing arrangement to be installed and designed to compensate the system owners (customers) for any potential generation that is injected to the utility grid or the concerned Distribution System Operator (DSO) grid.

The ESCO business models have gone through a tremendous transformation in the last 5-10 years. The evolution of ESCOs to finance more than just energy efficiency is a trend

³ <https://www.iea.org/reports/breakthrough-agenda-report-2022> - The Power Breakthrough is co-chaired by the Kingdom of Morocco and the United Kingdom.

⁴ The UK and Morocco are co-chairs of the Power Breakthrough. Morocco is an active member of the ETC since 2020.

⁵ <https://bit.ly/3xLe2fw>

⁶ www.integratetozero.org

recognized by MDBs such as the World Bank⁷, **increasingly combining solar, energy storage, EVs** and shifting from being consumers, becoming prosumers to generate electricity on their rooftops, and sell back to the utility.

I2Z will provide a grant to the successful business partner through this competitive RFP, this grant does not need to be returned to CECG, however the **financial and contractual arrangement between the business and the customer** should reflect the best commercial arrangement that can be negotiated, along the lines of the ESCO model. Funds that are paid back from the customer to the business should then be used transparently to expand the business opportunity of offering other customers such systems.

The successful business partner with the strategic support of the I2Z team and CECG partners and key national stakeholders will offer deep and rapid opportunities for agriculture and agri-food decarbonization in Morocco through integrated technologies, and demand-side management solutions. The success of the intended projects will be hinging on multi-sectoral and multi-actors' collaboration, government, private sector stakeholders partnering in:

- **demonstration, research, and development,**
- **adopting clean energy systems and digital technologies,**
- **enabling new competitive forms of investments and financing models; and,**
- **developing human capital, capacity building and public information campaigns.**

3. The RFP objectives

- Overall strategic objectives

The RFP aims to demonstrate up to three distributed energy systems (DES) to provide technical, economic, and environmental evidences to the government, donors and MDBs, business, technology providers and industry stakeholders on the benefits that these systems represent in decarbonizing key sectors such agriculture and agri-food, it will feed in to the ongoing national reflections on testing and finding viable efficient solutions to mitigate the effects of shocks stemming from COVID-19, energy price volatility affecting Morocco, and climate impacts given **the interlinkage between energy systems and food security**. Strategically the RFP will:

- Deliver DES that enables cost savings through demand management, backup clean energy supply, and injection of electricity surplus into the grid to contribute to its flexibility in line with the ongoing and continuous improvement of the regulatory framework,
 - Encourage fleet of local industries, business, national and international public, and private institutions to duplicate DES in their energy efficiency and clean energy actions and portfolio,
- **Specific technical objectives:**
1. **Installation** of an integrated energy system for up to three different customers in the agriculture and agri-food sector (eg food retail/shop, factory, restaurant, take-away, supermarket, farm, etc),

⁷ Evolving Energy Service Companies ESCOs in Emerging Economies:
https://www.youtube.com/watch?v=23_lhJomunI

2. Agreement of contractual terms⁸ between the supplier and the customer to reflect the best possible commercial arrangement for payback of the costs of the equipment. Alternatively, a leasing arrangement can be agreed,

3. Identification of options for how the revenue generated from the customer payments will be used to help develop this business opportunity for the supplier. In addition, it will be important to rationalize the economic opportunity for such systems to compete on costs with fossil-based energy supplies, through the grid and at the pump.

4. Preferred business model: we are looking for a company that can offer energy services⁹, including design and implementation of energy technology, that results in operational cost savings for the customer, which over time compensate for the capital expenditure (CAPEX). This is the Energy Service Company (ESCO) model; however, we recognize that the private ESCO market is nascent in Morocco and thus existing ESCO-like approaches in Morocco will be considered.

4. Relevance of the agriculture and Agri-industry sectors:

The agri-food industry is an emblematic sector of Morocco’s economy, with over \$17 bn annual revenue and more than 161.000 jobs (Morocco Now¹⁰). With the Moroccan journey to reach industrial growth, several national and foreign companies invested in the country have been attracted by the market potential and government incentives.

The sector is dynamic and resilient which ensures the supply of local and export markets with competitive products, reinforcing its strong position and worldwide growth. Furthermore, Morocco’s updated strategy on agriculture “Generation Green 2020-2030” places sustainability and innovation at the heart of its pillars, aiming to achieve the following goals:

- **Food autonomy:** new production capacities, R&D,
- **Competitiveness:** technological integration, digitalization, biodegradable food packaging, optimization of distribution channels,
- **Decarbonization** of production.

The new strategy highlights the importance of **integrated food-energy systems** (e.g agri-voltaic systems), which fully account for the nexus of energy (reducing emissions and achieve energy independence), food and water will optimize land use and advance circularity in energy-food linkages, recognizing and addressing trade-offs and harnessing synergies among the sectors.

5. The intended deliverables

Deliverables	What proposals should cover in response
1) Identify the customers and understand the economic	Agreement in-principle with potential customers should be submitted with your proposal, it needs to be signed and stamped by the two parties. This can cover customer’s economic background, importance of

⁸ A benchmark of existing practices and arrangement in-country could be helpful.

⁹ We encourage joint proposals as well between companies for the implementation of the purpose of this RFP. The joint proposals should indicate the lead company with authority to act for an on behalf of the other entities.

¹⁰ <https://www.morocconow.com/>

<p>opportunity, and associated payback terms.</p>	<p>energy efficiency and clean energy for them, existing efforts, etc. [1-2 pages].</p>
<p>2) Identify the system that can be offered to the customer.</p>	<p>An initial technical seize of the intended integrated clean energy systems within different customers' contexts, reflecting their current energy situation and performances, aligned with the “on site, on road, on grid” thinking. [5 pages].</p>
<p>3) Agree the contract with the customer.</p>	<p>A clear and precise description of the contractual and financial arrangement between the business and the customer, this could include (not exhaustive) aspects on payment conditions and options, providing asset maintenance to customers for the life of the installed DES, equipment guarantees, performance guarantees, etc. [2 pages].</p>
<p>1) Costs, installation of the system and ensure it is functioning.</p>	<p>The cost of designing and implementing the demonstration project (in form of a financial proposal). We invite to use the annexed excel table (Market Insight template) in preparing your financial offers, or submit an inquiry of the template to Rachid Ennassiri: rachid@integratetozero.org</p> <p>Anticipated emissions avoided per customer over a specified timeframe through displacement of existing energy sources.</p> <p>Suggest a methodology of implementing projects.</p> <p>Proposals should include one page on critical path issues and risk factors that could negatively impact implementation, and any viable mitigation measures for managing such risks. [3 pages].</p>
<p>2) Capacity building</p>	<p>2 to 3 capacity building sessions on the implemented demonstration systems for the technical staff of the concerned customers.</p> <p>Future workforce of clean energy systems: 2 capacity building and training sessions for the students at the high school Ibn Al Haitham (electrical science and technology) and the Training Institute for Renewable Energies and Energy Efficiency Professions (IFMEREE), both in Ouarzazate city, home of the biggest concentrated solar plant (CSP) in Africa.</p>

	<p>Lessons learned from the projects, policy recommendations from demos proven technical evidence:</p> <ul style="list-style-type: none"> • 1 informative session with Morocco’s Super ESCO (SIE), Ministry of Energy Transition and Sustainable Development, and key governmental and non-governmental stakeholders. • 1 informative session with the members of the Energy Transition Council (ETC).
3) Report to I2Z and CECG teams: mid project catch-up calls and an end of project report	<p>Applicants must explicitly commit to:</p> <ul style="list-style-type: none"> - send a bi-weekly report on the state of progress (up to 2 pages). - weekly/bi-weekly regular calls. - a final report of <u>10-15 pages</u> and PowerPoint presentations describing the journey of designing and implementing DES in Morocco. The content of such a report can be discussed as the implementation progresses. - A comms toolkit of the DES demonstration projects (videos, graphs, quotes, impact, etc). <p>These deliverables will feed in as well to the Glasgow Breakthrough agenda and ETC processes in 2023.</p>

6. Call for proposals and implementation timeframes

Call for proposals opens	28 October 2022
The deadline for submission of proposals closes	25 November 2022
Assessment of proposal	25-31 November 2022
Selection of the successful applicants	December 2022
Implementation	January – June 2023
Reporting I2Z showcase at COP28 in UAE and other key milestones in 2023.	2023

7. Submittal & review

Applicants must submit their proposal no later than **25 November 2022**, via email to rachid@integratetozero.org and copy info@integratetozero.org and imane.moubachir@sie.co.ma. Please title the email in the subject field as “**I2Z Morocco – NAME OF YOUR COMPANY/CONSORTIUM - #2022-23.**”

Proposals received after the specified time will not be considered and will be returned to the responding business.

8. Operations control

To carry out the implementation of DES demonstration's projects by the business partner, structures for steering, monitoring, and carrying out the project will be put in place, namely:

- **A steering committee:** to set guidelines and make key decisions.
- **A monitoring committee:** to validate the different documents and other deliverables and to carry out the various receptions.

The members making up the two committees will be appointed by the Integrate to Zero team in close consultation with SIE and the concerned stakeholders.

The successful local business partner under the guidance of CECG, I2Z Morocco's advisor and SIE, will ensure the appropriate implementation of their suggested methodology and action plans. Thus, it will periodically present and regularly transmit to the monitoring and steering committees a dashboard detailing the progress of the field implementation.

9. Quality of the project team

The successful applicant that will be assigned to the design and implementation of DES **must be versatile, qualified, and experienced**. It should be composed of a project director with sufficiently proven experience in leading the design and implementation of distributed energy systems, local, qualified, and labeled specialized technicians, and engineers.

The members of the team assigned to each deliverable of the project must have the profiles necessary for the mission of the component, have experience in the matter and be present during the presentation of the deliverable in question to the I2Z.

The steering and monitoring committees reserve the right, however, to request the replacement of any member whose competence is deemed insufficient or whose behavior is unacceptable. The people proposed as replacements must have qualifications and experience deemed acceptable by the steering and monitoring committees.

10. Budget

The grant funding available for this RFP is \$500,000.

11. Grants terms

Grant will be made in accordance with the following terms:

- i. **30%** of the project budget upon validation of the overall methodology and implementation action plan.
- ii. **40%** of the project budget upon validation of the contractual and financial arrangement.
- iii. **30%** of the project budget upon implementation and validation of the reporting deliverables.

12. Selection

Applicants will be reviewed and ranked based on evaluation criteria (annexed). Integrate to Zero (I2Z) and its partners reserve the right to request additional information or clarification from businesses responding to this RFP.

All applicants deemed responsive will be evaluated using the evaluation criteria as well as the following:

- 1) Best value
- 2) Relevant experience and qualifications of the business
- 3) Schedule

- 4) Overall response to the RFP (how comprehensive the energy system is)
- 5) Demonstrated ability to meet the RFP Goals

13. About Integrate to Zero

Integrate to Zero (I2Z) is a global initiative empowering policymakers, businesses, and civil society to integrate clean energy systems (on-site, on-grid, on-road). I2Z is generating evidence, engaging leaders, enabling markets, and finding solutions for scaling action. I2Z aims to help deliver a simpler, faster, cheaper energy transition that reduces emissions in line with climate science. **I2Z is supported by the Climate Emergency Collaboration Group (CECG).**

14. About CECG

The Climate Emergency Collaboration Group (CECG) is a collaboration between some of the biggest climate philanthropies globally (IKEA, Hewlett, Open Society, Quadrature, Clif and Sequoia). We use our convening and philanthropic power to facilitate stronger collaboration, coordination, and campaigning from the global climate movement in pursuit of increased climate action.

15. About SIE

The Energy Engineering Company (SIE) is a state-owned energy services company (Super ESCO), it's a public entity whose mission is to sustainably reduce the energy consumption of public and private organizations, while improving their energy performance in order to contribute to attaining the national energy efficiency and NDC targets.

SIE support SMEs and ESCOs through the development of the EE Market with the public administration, local communities, public enterprises, and institutions, as well as private sector companies

16. RFP contact information

- **Mr Rachid Ennassiri**, I2Z advisor - Morocco: email: rachid@integratetozero.org /phone: +212652528614, copying info@integratetozero.org and Ms **Imane Moubachir**, the Energy Engineering Company (SIE), Email: imane.moubachir@sie.co.ma

Annexe 1: evaluation criteria

A technical score out of 150 points will be awarded to each applicant and calculated according to the following scale:

➤ **Experience of the applicant in the field of the RFP: scored out of 20 points:**

Evaluation criteria	Document serving as the basis for the rating	Rating	
Experience of the applicant in the areas of clean energy systems (maximum score 20 points)	Presentation sheet of each project carried out in the fields of the RFP or similar. A list of all customers that you have provided services for within the past three-five years. include contact information and products/services provided. A list of all subcontractors and/or suppliers that your company has used to support clean energy systems projects over the past three years; include contact information and products/services provided.	1 to two projects	5 points
		Three to five projects.	10 points
		Three projects to five.	15 points
		Eleven projects or more.	20 points

➤ **Technical proposal: 50 points**

CECG and I2Z teams are looking for inclusive, comprehensive technical proposals which reflect their impact on real world end customers. Proposals should be concise, well-organized and demonstrate the qualifications, experience, and approach necessary to meet the RFP goals.

1. Provide a clear description as per to the intended deliverables above of the proposed approach to implementing the DES projects.
2. Technical proposal responding to the I2Z thinking **ON SITE, ON ROAD, ON GRID**: comprising grid-interactive energy efficient appliances, renewable energy system, storage, electric vehicle and its charging, electrification of end-uses, access to the grid, smart meters, digital and software tools (on-site generation to building, on-site generation to vehicles, vehicles to building, building to vehicles, vehicles to grid, etc).
3. Highlight how concerned customers can have a significant potential to transition from being isolated energy consumers to energy efficient and zero carbon active energy prosumers, unlocking the potential for dynamic energy efficiency, flexibility, and renewables integration within the energy system.
4. Demonstrate how such systems supported **by digital and software solutions** and structured planning, design and implementation can enable customers to produce, consume, store, sell and buy energy through technically possible interactions with the

national/sub-national grid in an optimized, economically, and environmentally sustainable manner.

5. Include plans for facilitating measurement and verification of installed DES performance over the useful life of the installed equipment, by providing reliable information on the performance of the assets to support asset management, reporting, etc.

➤ **Quality of the proposed methodology and implementation action plan: 40 points**

Evaluation criteria	Rating
Methodology and implementation action plan partially meeting the RFP.	15 points
Methodology implementation action plan fully meeting the RFP.	35 points
Enriched and improved methodology implementation action plan with respect RFP.	40 points

➤ **Detailed timetable for the assignment of experts: 10 points**

Evaluation criteria	Rating
- Coherent and detailed timetable: detailed distribution of tasks. - Allocation of resources.	10 points
- Coherent but not detailed timeline	5 points
- Inconsistent timeline	0 points

➤ **Human resources, composition, and quality of the team: 30 points**

- CECG and I2Z desire **qualified partners** capable of providing end-to-end projects development and installation services necessary to implement an innovative DES.
- The rating of the team in charge of carrying out the demonstration of DES is based on the analysis of the company financial and technical background, CVs of the team, duly signed by the interested parties and on their diplomas. The CVs must make it possible to assess the nature and number of projects conducted by the proposed members team and their professional experience, in the fields covered by this RFP. This rating is broken down as follows:

Expert profile	Point	document serving as a basis for the rating	Rating

Project Manager	9	Diploma CV	<ul style="list-style-type: none"> ➤ References as a project manager with sufficiently proven experience in designing and implementing clean energy systems projects: One point per reference; the score will be capped at 8 points. <p>Diplomas:</p> <ul style="list-style-type: none"> ➤ Doctorate, Phd, State Engineer, Grandes Ecoles, DEA or equivalent: 1 point ➤ Application engineer, license, or equivalent: 0.5 points. Less than Bac+3: 0 point
Qualified and labeled specialized technicians and engineers.	9	Diploma CV	<ul style="list-style-type: none"> ➤ References in the field of designing and implementing clean energy systems: 1 point per reference; the score will be capped at 8 points. <p>Diplomas:</p> <ul style="list-style-type: none"> ➤ Doctorate, Phd, State Engineer Grandes Ecoles, DEA or equivalent: 1 point ➤ Application engineer, license or equivalent: 0.5 point. Less than Bac+3: 0 point
TOTAL	30		

Technical score is calculated as follows:

NT = Score of Experience of the applicant in the field of the RFP + technical proposal + quality of the proposed methodology and implementation action plan + Detailed timetable for the assignment of experts + f Human resources, composition, and quality of the team.

Any score (NT) less than or equal to 70 is eliminatory.

Annexe 2: non-exhaustive list of illustrative projects

Illustrative Example 1

A food delivery business in Morocco uses energy for the warehouse, especially for refrigeration. They have roof space available for a PV array. This can power the refrigerators, but also it can be used to power electric wheel bikes, or the 100% electric small vehicle AMI made in Morocco which is used for small deliveries of the food. Using on-site solar to power the bike avoids buying (imported and subsidized) petrol. A charger for the bike can be installed on site. For power that is needed outside daylight hours then the battery can be added to power overnight refrigeration or to charge the e-bike overnight.

Illustrative Example 2

A rural cooperative in the Atlas Mountains develop and sell in the market agricultural products such as Safran and roses, to reduce the costs of production factors, the cooperative installed solar-plus-storage systems on its building. Thanks to the sunny weather of the region during the year, the system can provide up to 8-9 hours of power. The system provides bill savings under normal operations which makes it possible to the cooperative to extend its business eg by creating more jobs and generating added value.

Illustrative Example 3

A take-away restaurant in Marrakesh uses electricity to power the kitchen. They can electrify the cooking with an electric oven that can be powered by the PV. The PV can also power an e-bike that can be used to deliver the take-away food.