

Decentralized Renewable Energy as a Pathway to a Just Energy Transition in Egypt - Roundtable Report



Table of Contents

1- Acknowledgements	3
2- Setting the Scene: A Transition Rooted in Justice and Resilience	4
3- Progress to Date: A Strong Regulatory Foundation	5
4- Lived Experiences: Opportunities and Barriers on the Ground	5
4.1- Tangible Benefits	5
4.2- Persistent Barriers	6
5- Key Systemic Challenges	6
5.1- Grid Connectivity and Infrastructure	7
5.2- Financing and Incentives	7
5.3- Institutional Coordination	7
5.4- Access to Information and Support	8
6- Looking Ahead: Priority Areas for Action	8
6.1- From Legal Framework to Equitable Implementation	8
6.2- Financing and Grid Modernization	8
6.3- Institutional Coordination and Policy Integration	8
6.4- Cooperatives and Community Energy Models	9
6.5- Agriculture and the Energy Transition (Smallholder Farmers)	9
7- Conclusion	9

ACKNOWLEDGEMENTS

We/The partners would like to acknowledge all participants for their thoughtful and active contribution that helped shape the dialogue and ensured the successful completion of the roundtable Decentralized Renewable Energy as a Pathway to a Just Energy Transition in Egypt.

We extend our deepest appreciation to the representatives from the Ministry of Foreign Affairs, the Institute of National Planning, the Ministry of Agriculture, the Ministry of Environment, and the Egyptian Parliament, and Senate, whose willingness to engage with ground-level realities enriched policy discussions. We are equally grateful to the legal experts and counselors who provided nuanced insights into regulatory frameworks, and the researchers that bridged academic rigor with practical solutions. Most fundamentally, we honor the farmers, cooperative leaders, and small-scale producers who shared candid accounts of their successful experiences, daily struggles and aspirations. Their lived experiences transformed abstract concepts into urgent human imperatives, anchoring the dialogue in the lived realities of those most affected by energy transitions.

- Pathways Beyond Neoliberalism: is a research project based at the American University of Cairo, that aims to contribute to redefining how the economy is related to politics, going beyond the predominant neoliberal paradigm;
- Greenpeace MENA: is a politically and financially independent regional NGO that aims to address the complex environmental and climate challenges of the MENA region;
- Social and Cooperative Economy Network (SCEN MENA): is a regional non-profit, grassroots civil entity established through the initiative of activists and consultants in the field of cooperatives and the social economy.

On February 11, 2026, at The American University of Cairo - Pathways Beyond Neoliberalism, Greenpeace MENA and the Social and Cooperative Economy Network SCEN MENA, partnered to convene a high-level roundtable to bridge the persistent gap between theoretical and policy debates on the one hand and the practical realities of renewable energy practitioners in Egypt on the other.

Decentralized Renewable Energy as a Pathway to a Just Energy Transition in Egypt - Roundtable Report

By bringing together 19 diverse stakeholders from government representatives, and parliamentarians, to civil society organizations, experts, and community members; the roundtable enabled an inclusive and participatory dialogue to identify systemic barriers and collaborative opportunities, and outline a roadmap for future engagement.

This report documents the events' proceedings, and highlights key insights from the discussions, including reflections on how more inclusive and locally grounded energy approaches can complement existing systems. In this context, Decentralized Renewable Energy (DRE) - understood as renewable energy systems that are generated closer to the point of use, such as rooftop solar, community-scale installations, and small-scale productive-use systems - is presented as a promising pathway to support Egypt's energy transition in a way that enhances resilience, equity, and energy sovereignty.

Egypt's energy transition is also unfolding within an increasingly volatile regional context that has exposed the vulnerabilities of fossil-fuel based energy systems. Ongoing geopolitical tensions and conflict in the region have heightened risks of supply disruptions, price volatility, and broader economic instability. At the same time, Egypt's growing reliance on imported gas, including from Israel, has introduced new dependencies that can be subject to political and market fluctuations beyond national control. These dynamics underscore that energy is not only a technical or economic issue, but a question of resilience and sovereignty. In this context, diversifying energy systems through locally generated, renewable sources becomes critical to reducing exposure to external shocks and strengthening long-term stability and resilience.

Setting the Scene: A Transition Rooted in Justice and Resilience

Participants emphasized that Egypt's energy transition must reflect its high vulnerability to climate impacts, despite its relatively low historical contribution to global emissions. In this context, issues such as adaptation, food security, and loss and damage are not peripheral, they are central to any credible pathway forward.

A key takeaway from the opening discussions was that the transition must deliver tangible, near-term benefits for those most affected by climate and economic pressures, particularly farmers, households, and small producers.

Decentralized Renewable Energy as a Pathway to a Just Energy Transition in Egypt - Roundtable Report

Within this framing, decentralized renewable energy was positioned not only as a technical solution, but as a driver of structural change. It offers opportunities to:

- Expand access to affordable energy
- Strengthen local economic resilience
- Enhance community-level energy sovereignty
- Rebuild trust in climate policies by linking them to everyday needs

Progress to Date: A Strong Regulatory Foundation

Egypt has made important progress in building a regulatory framework that enables renewable energy expansion. A legal and regulatory overview presented during the roundtable highlighted key developments over the past decade, including:

- Legal provisions enabling auto-production of electricity
- The introduction and evolution of net metering systems
- Recognition of renewable energy as a national priority in legislation and policy

These measures demonstrate that Egypt has established a solid foundation for scaling renewable energy systems, including decentralized solutions.

Lived Experiences: Opportunities and Barriers on the Ground

One of the most impactful segments of the discussion came from farmers and community representatives, who shared their direct experiences with solar energy systems.

Tangible benefits

Participants highlighted clear economic and operational gains:

Decentralized Renewable Energy as a Pathway to a Just Energy Transition in Egypt - Roundtable Report

- Reduced reliance on diesel and lower irrigation costs
- Increased agricultural productivity
- Greater cost stability over time
- Improved autonomy in energy access

For many, solar energy has enabled the expansion of cultivated land and reduced exposure to volatile fuel prices. Over the long term, solar was seen as a pathway to cost stability and greater autonomy.

Persistent barriers

At the same time, significant challenges remain:

- High upfront costs and long payback periods
- Rising prices of equipment and spare parts
- Limited access to concessional financing
- Gaps in technical knowledge and advisory support

Grid connectivity emerged as a particularly critical issue. Farmers emphasized that solar alone is not sufficient; reliable access to electricity outside daylight hours requires hybrid systems that combine solar with grid access. However, many face:

- Complex and unclear connection procedures
- Minimum capacity thresholds that exclude small producers
- Administrative delays and inconsistencies

As a result, many small-scale producers must navigate complex systems without adequate support, limiting the accessibility of DRE solutions.

Key Systemic Challenges

Across discussions, four interrelated structural challenges emerged. Addressing these challenges is essential not only for scaling renewable energy, but for reducing reliance on

Decentralized Renewable Energy as a Pathway to a Just Energy Transition in Egypt - Roundtable Report

external energy sources and enhancing national resilience:

1- Grid Connectivity and Infrastructure

While policies allow decentralized generation, connecting to the national grid remains difficult in practice. Technical constraints, administrative complexity, and infrastructure limitations all contribute to an implementation gap between policy and reality.

2- Financing and Incentives

Scaling DRE requires:

- Affordable financing for small producers
- Investment in grid modernization
- Incentives to reduce upfront costs

Without targeted support, adoption remains out of reach for many farmers and small businesses.

It is worth noting that the financing and infrastructure challenges were closely tied to broader justice debates. Some participants situated grid investment within the framework of global climate finance, arguing that developing countries should not bear the full cost of upgrading systems necessary for a just transition.

3- Institutional Coordination

SParticipants pointed to fragmentation and coordination gaps between institutions, including ministries, regulators, and sectoral actors, as a major barrier. Limited coordination leads to:

- Confusion around procedures
- Slower implementation
- Gaps between policy design and execution

Decentralized Renewable Energy as a Pathway to a Just Energy Transition in Egypt - Roundtable Report

4- Access to Information and Support

A recurring theme was the lack of structured outreach and advisory services for communities and farmers. Many potential users are not fully aware of the benefits of DRE and available mechanisms, or lack the capacity to navigate them.

Looking Ahead: Priority Areas for Action

The roundtable made clear that Egypt does not need to build its DRE ecosystem from scratch. Instead, progress depends on targeted action in key areas:

From legal framework to equitable implementation:

While Egypt's regulatory architecture for decentralized renewable energy is relatively advanced, greater focus is needed on closing the implementation gap, including clarifying grid connection procedures, simplifying administrative processes, and ensuring small-scale producers can meaningfully access existing mechanisms such as net metering.

Financing and grid modernization:

Unlocking decentralized renewable energy at scale will require targeted financial mechanisms for farmers and small producers, as well as strategic investment in grid infrastructure. Policy work in this area could explore concessional financing models, incentive structures, and pathways for mobilizing domestic and international climate finance.

Institutional coordination and policy integration:

Strengthening coordination across ministries, regulators, parliament, and community actors is essential. Future engagement could focus on identifying governance reforms and cross-sectoral platforms that reduce fragmentation and support integrated implementation.

Decentralized Renewable Energy as a Pathway to a Just Energy Transition in Egypt - Roundtable Report

Cooperatives and community energy models:

Cooperative and community-owned energy systems emerged as promising vehicles for scaling renewable energy in an equitable manner. Further analysis and dialogue could explore enabling legal frameworks, financial models, and governance arrangements that strengthen cooperative autonomy and expand community-level ownership.

Agriculture and the energy transition (smallholder farmers):

The agricultural sector, particularly smallholder farmers, stands at the intersection of climate vulnerability, food security, and energy access. Dedicated policy attention could examine hybrid energy systems, targeted incentives, technical advisory support, and pilot initiatives designed specifically to address the needs of small-scale agricultural producers.

Conclusion

There was clear consensus that decentralized renewable energy can play a meaningful role in advancing an energy transition in Egypt that is both resilient and inclusive.

Unlocking this potential will depend on closing implementation gaps and ensuring that systems are accessible, coordinated, and responsive to the needs of those on the frontlines.

With targeted action, decentralized energy can contribute to strengthening energy sovereignty and reducing exposure to external energy shocks while supporting livelihoods and sustainable development.



pathways@aucegypt.edu