

SCALING UP RENEWABLE ENERGY AND ENERGY EFFICIENCY TO MAXIMISE THE SOCIOECONOMIC IMPACT – THE CASE FOR HOUSEHOLD APPLICATIONS IN JORDAN

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EuroMeSCo has become a benchmark for policy-oriented research on issues related to Euro-Mediterranean cooperation, in particular economic development, security and migration. With 116 affiliated think tanks and institutions and about 500 experts from 30 different countries, the network has developed impactful tools for the benefit of its members and a larger community of stakeholders in the Euro-Mediterranean region.

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As part of this project, five Joint Study Groups are assembled each year to carry out evidence-based and policy-oriented research. The topics of the five study groups are defined through a thorough process of policy consultations designed to identify policy-relevant themes. Each Study Group involves a Coordinator and a team of authors who work towards the publication of a Policy Study which is printed, disseminated through different channels and events, and accompanied by audio-visual materials.

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The **European Institute of the Mediterranean** (IEMed), founded in 1989, is a think and do tank specialised in Euro-Mediterranean relations. It provides policy-oriented and evidence-based research underpinned by a genuine Euromed multidimensional and inclusive approach.

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The IEMed is a consortium comprising the Catalan Government, the Spanish Ministry of Foreign Affairs, European Union and Cooperation, the European Union and Barcelona City Council. It also incorporates civil society through its Board of Trustees and its Advisory Council.

Abstract

According to the Department of Statistics, the Hashemite Kingdom of Jordan is a middle-income country and has a population of around 11 million inhabitants. Jordan's economy experienced a wide range of challenges but the coronavirus pandemic had a significant effect on the country's economic and social structure. It also had a negative impact on other aspects of the economy, such as the unemployment rate and the nation's rising debt levels. Jordan has opened its doors to receiving refugees as a result of the instability in the region (The World Bank, 2022). The country continues to house the second-highest number of per capita Syrian refugees worldwide, after Lebanon, as stated by the United Nations High Commissioner for Refugees (UNHCR). Consequently,

there was increased demand for services, infrastructure, energy and water supplies, as well as for healthcare, education and other sectors of the Jordanian economy (UNHCR, 2022).

Promoting social justice in development in general and sustainability in particular proved a more complex mission. By showing the practice and investigating the implemented programmes where renewable energy (RE) and energy efficiency (EE) applications were set for households (HHs) in Jordan and scaling up locally and regionally to maximise the socioeconomic impact and achieve the targeted development for vulnerable populations, this paper will concentrate on reviewing the linkage between the country's social and economic development plans and the goals of clean and sustainable energy.

Scaling Up Renewable Energy and Energy Efficiency to Maximise the Socioeconomic Impact – The Case for Household Applications in Jordan

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Introduction and rationale

The last two decades have seen the world battle with numerous issues that have had a detrimental impact on global economic growth. Increased population, high unemployment rates, rising inflation rates and slow economic growth are all intimately related to the social economy, as are other challenges, including environmental crises, regional conflicts and climate issues that substantially increase social exclusion and injustice.

The inequality gap has also expanded; as per The UN Sustainable Development Goals Report 2022, the COVID-19 pandemic and the Ukraine war significantly affected the poverty rate between 2019 and 2020. It underlines that “more than four years’ progress against poverty has been erased” and that the pandemic is responsible for pushing 93 million people worldwide into extreme poverty in 2022 (UN, 2022). The risk of food insecurity has emerged due to the disruption of the world’s food supply system by various factors, such as the supply chain connected to epidemics and conflicts. The pandemic harmed the education system due to the closure of schools and the quality of education’s profound implications for children’s learning and well-being, especially for girls and those who are underprivileged, such as those with disabilities, those who live in rural areas, and members of minority groups. In addition to the social and economic effects of the pandemic, the world is not on schedule to achieve gender equality by 2030. Because of the pandemic, women are being pushed out of the workforce and to perform more unpaid domestic and care tasks. In terms of unpaid domestic and care tasks, women already do nearly 2.5 times as much time as males (UN, 2022).

The potential to prevent a global crisis is fast shrinking as the world is on the verge of one. Climate change-related heatwaves, droughts and floods are already harming billions of people worldwide and may have an irreversible impact on ecosystems on a global scale. Many other facets of sustainable development depend on water, which is in danger. The need for water is increasing, and the most vulnerable people continue to see considerable discrepancies in access to sustainable energy, *increasingly lagging behind* in achieving fundamental sustainable development goals (SDGs) (UN, 2022).

These elements will deepen existing inequalities, severely affecting the most vulnerable and underprivileged groups. These factors run the risk of escalating population discontent and isolation, which would erode societal cohesion.

Like several other regions worldwide, the Middle East and North Africa (MENA) region is still an unequal area. It exhibits a persistent and widening opportunity divide, mostly among certain demographic groups and in specific places. For instance, over the past 25 years, adolescent unemployment has reached an all-time high and is currently 3.8% higher than the average for adult employees. Unemployment affects several demographic groups, including women, and is substantially higher for people with disabilities than for males and non-disabled people (ESCUWA, 2022).

To expedite the economic recovery following the COVID-19 pandemic and the numerous issues faced by countries, bridging the gap between social justice and international economic development must be at the top of policy-makers’ development agendas, which could be addressed through the SDGs.

Various studies have proven that energy transition has had a positive socioeconomic

influence on the entire world, particularly in terms of gross domestic product (GDP) and employment (Pollitt, Park, Lee, & Kazuhiro, 2014) (Xavier, Rabia, & Bishal, 2019). In comparison to the reference case, there is a 0.14% relative increase in employment under the transition scenario. The energy transition may result in increased GDP and employment as well as broader welfare benefits (Xavier, Rabia, & Bishal, 2019).

“Towards More Social Justice and Inclusiveness in the Mediterranean” was the subject of the EuroMeSCo conference

held in Amman on 28 June 2022. This paper will examine the link between the country’s social and economic development goals and the clean energy and sustainable energy goals. The concept of this report is presented with a focus on Jordan by outlining and analyzing the programs that were put in place where applications for renewable energy (RE) and energy efficiency (EE) were set for households (HHs) in Jordan and scaled up locally and regionally. This is done in order to maximize the socio-economic impact and achieve the planned development for vulnerable groups.

Jordan Country Focus

Economy

The Hashemite Kingdom of Jordan has a middle-income status and a population of around 11 million inhabitants (Department of Statistics, 2022). The coronavirus pandemic has had a substantial negative impact on Jordan's economic and social system, seriously affecting issues like the unemployment rate and rising debt levels, among others, despite its well-known robust economy.

The country has been impacted by the unrest in the region and has accommodated migrants; according to the UNHCR, Jordan continues to be the second country per capita in the world to host Syrian refugees (UNHCR, The UN Refugee Agency, 2022).

This further harmed the Jordanian economy and raised the demand for services, infrastructure, energy, water, education and other basic requirements. Jordan's extremely high unemployment rate reached 22.8% in the first quarter of 2022 (Department of Statistics, 2022).

The country's labour market has already reached unheard-of levels of vulnerability due to the effects of the pandemic on development. Additionally, the World Bank's most recent press release from July 2022 states that the impact of the war in Ukraine in terms of supply constraints and rising commodity prices exacerbates major downside risks to the nation's economic outlook.

Geography

Twelve governorates, spread across the north, middle and south of Jordan, comprise its territorial division. Each region has a different climate and topography, which affects the people who live there and the employment options that are accessible to them.

Cities that are dispersed geographically and have poor infrastructure make it difficult for people to look for jobs in the northern or southern governorates. More than 56% of the population live in the middle governorates of Amman, Zarqa and Madaba, where most jobs are concentrated. The northern governorates are mountainous and host many refugees, with a focus on agricultural jobs and certain industrial zones near Irbid. The climate is dry, desert topography predominates, and nomads are the majority in the southern governorates (nomadic cultures). With a high concentration of tourism jobs (and, for the latter, shipping and logistics), the "golden triangle" of Petra, Wadi Rum, and Aqaba, Jordan's only port city, is crucial to the growth of the country's economy (The Challenge Fund for Youth Employment, 2022).

Jordan's strategies review

The principles of justice and equality as well as the protection of human rights serve as firm foundations and a guiding light during the transformation process in Jordan, which is undergoing radical legislative, political and economic changes to create the necessary environment and overcome obstacles to restore Jordan to statesmanship in the region (The Hashemite Kingdom of Jordan Second Voluntary, 2022).

The urgency to promote the stage of recovery from the pandemic, considering the economic, social and environmental dimensions of sustainable development, as well as the necessity of establishing the rule of law to promote work in line with the principle of "Leave No One Behind" (LNOB), have led Jordan to launch the *Indicative Executive Development Programme (2021-2024)* and the *Government Priorities Action Programme (2021-2023)*.

Initiatives including women, young people, people with impairments or living in underprivileged and rural areas, and refugees have been implemented. To enhance the economy's competitiveness, speed up growth and expand employment possibilities, Jordan also started executing a *Reform Matrix (2018-2024)*, which includes both policy initiatives and structural reforms. The goal of a medium-term public debt management strategy is to ensure that the government's funding requirements and repayment commitments are met while enacting fiscal austerity measures.

The financial inclusion national strategy project

Three core policy areas – microfinance, digital financial services, and funding small

and medium enterprises – form the primary sectoral pillars of Jordan's national strategy for financial inclusion. FinTech, consumer financial protection, financial capabilities, data and research, laws, regulations, and instructions are all regarded as supportive and cross-cutting factors that promote the growth and resilience of industries.

The strategy successfully achieved the sustainable development objectives of raising the level of financial inclusion in the Kingdom from 33.1% to about 50% and decreasing the gender gap from 53% to 29%. These objectives were related to expanding access to financial services for small businesses and other institutions (Central Bank of Jordan, 2018).

The National Social Protection Strategy

In the context of the fight against poverty and social exclusion, the *National Social Protection Strategy (NSP) (2019-2025)* was designed. Social assistance, the empowerment of social services, and the axes

of social security and decent work are all included. Incorporating these axes into a holistic axis for responding to crises and shocks, such as the COVID-19 example, is now being worked on. The Strategy outlines the government's determination to break the intergenerational cycle of poverty and to create a "Social Protection Floor" within the framework of the Kingdom's vision for a state of solidarity, production and justice. Three pillars make up the plan's framework: 1) Decent work and social security; 2) Social assistance; 3) Social services. The present position of each pillar and issues are examined along with each sector's high priority policy initiatives (MOSD, MOPIC, UNICEF, 2019).

The National Food Security Strategy (2021-2030)

The first *National Food Security Strategy (NFSS) (2021-2030)* has been developed to achieve its vision of "Protecting Jordan's Population from Food Insecurity" and ensuring access to safe, stable, nutritious and affordable food supplies at all times by the year 2030. Food security is given special consideration in Jordan. To achieve human and national security, there must be adequate food security. As a result, the plan aims to support prosperity, growth and the maintenance of Jordan's status as a regional hub for peace and stability (National Food Security Strategy, 2022).

The National Strategy for Women in Jordan 2020-2025

Without leaving anyone behind, Jordan sees the fifth aim as the core of an all-encompassing, sustainable growth process. Through the implementation of the *National Strategy for Women (2020-2025)*, integrating it into the government's indicative executive programme, and allocating the necessary funding for its implementation, it continues to take steps to empower women

and activate their participation in economic and political life. The strategy intends to boost women's engagement in security sector jobs and peacekeeping operations locally and internationally, as well as their representation in senior leadership positions and retention in the workforce (The Jordanian National Commission for Women, 2020).

Economic Modernisation Vision

The vision includes 366 initiatives across a range of sectors as part of eight national economic growth drivers focused on maximising Jordan's potential for comprehensive sustainable growth and creating job opportunities. The vision will be implemented in three phases over ten years. It identifies drivers for employment and economic growth, which will require JD 41 million ~ 56 million euros in investments and financing in the upcoming decade, the majority of which is expected to come from the private sector, including foreign direct investment and public-private

partnership projects. A variety of strategic goals that would affect social justice and inclusiveness have been formed through the adopted pillars of the vision, which include social growth and work to improve quality of life and achieve sustainability:

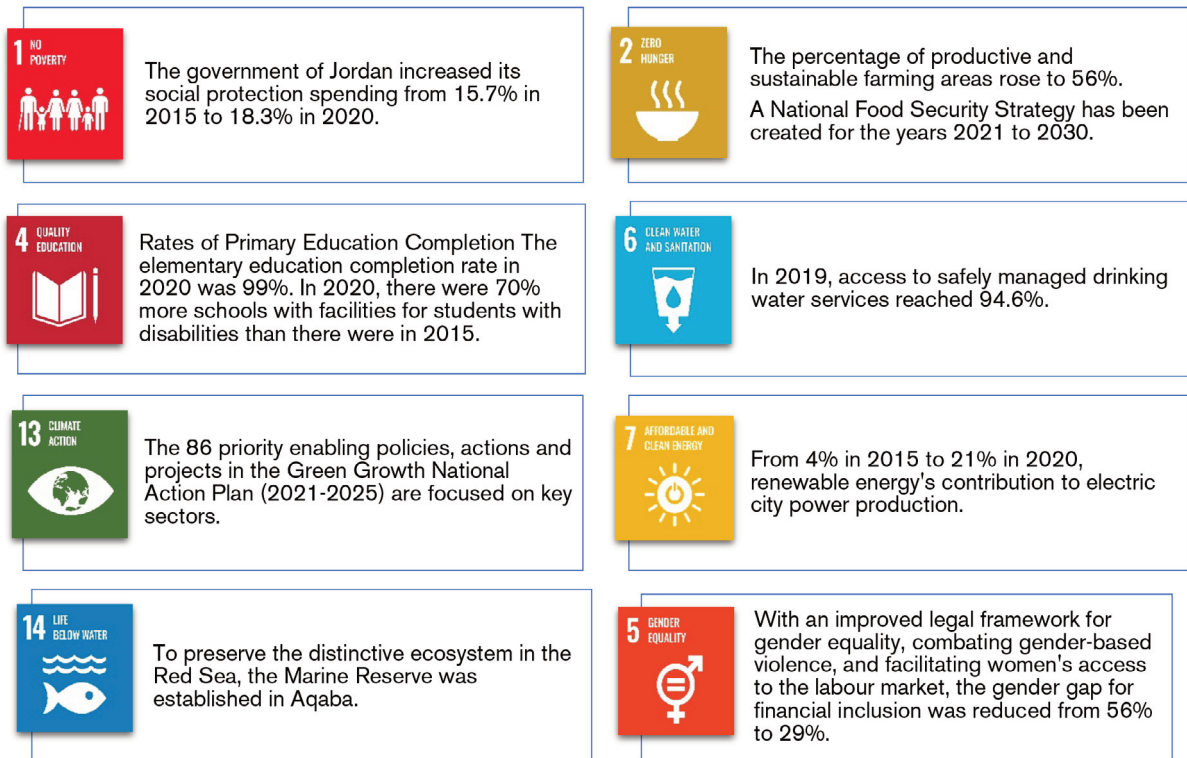
- Accommodate 1 million young females and males in the labour market in 10 years.
- Increase income per capita by, on average, 3% per year.
- Improve Jordan's ranking in the Global Competitiveness Index to the top 30 percentile.
- Double the percentage of Jordanians satisfied with their quality of life to 80%.
- Have one Jordanian city ranked among the top 100 cities in the world.
- Improve Jordan's ranking in the Legatum Prosperity Index to the top 30 percentile

(Economic Modernisation Vision, 2022).

Progress in Sustainable Development Goals

Jordan's Second National Voluntary Review (VNR) for 2022 indicates evidence of progress toward 8 of the 17 SDGs. According to the Report, 62.7% of SDGs analysed reflect positive trends; 19% show consistent trends; and 18.4% still have negative trends (MOPIC, 2022).

Figure 1. Progress in Sustainable Development Goals (SDGs)



(MOPIC, 2022).

Jordan's energy profile

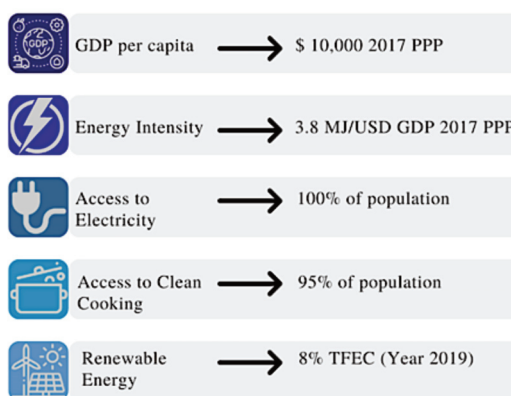
The exponential rise in both the population and the economy is what is driving the country's rising domestic energy demand. The energy sector is a significant contributor to greenhouse gas (GHG) emissions and is responsible for 81% of Jordan's total emissions. Additionally, Jordan primarily depends on imports of crude oil, petroleum products, and natural gas due to its lack of domestic resources to meet its rising energy demand. As a result, this dependence strains the economy and jeopardises Jordan's security of energy supply because more than 88% of its energy requirements are imported, down from 97% in 2014 (MEMR, Overview of Jordan's

Energy Sector - Solarity Energy Awareness Conference, 2022).

In the energy sector, this decrease is recognised as a remarkable success. To lower GHG emissions, alternative energy sources are becoming increasingly necessary. According to Jordan's nationally determined contributions (NDCs), which commit to a 31% reduction in GHG emissions by 2030, this sector should be the focus of mitigation actions (Ministry of Environment, 2021).

According to the International Renewable Energy Agency (IRENA), Jordan's most recent updated statistical profile shows the following indicators (IRENA, 2022):

Figure 2. Jordan's statistical profile



To address energy challenges and maintain energy security, *Jordan adopted the Jordan Energy Strategy 2020-2030*, formed by the Ministry of Energy and Mineral Resources (MEMR). The strategy aims to diversify Jordan's energy supply, increase the proportion of local energy in its energy mix, reduce its dependence on imported oil and electricity costs, and improve environmental protection. A goal of 9% less energy use across all sectors was set based on the strategy's content (MEMR, Strategic and Action Plans, 2020).

The country has undertaken steps to achieve these aims by enacting a sustain-

able energy policy and opening up the energy markets, which include the markets for oil products.

Jordan has promoted regional connectivity initiatives by maximising their value, encouraged private investments to speed up the development of energy infrastructure projects, and increased energy efficiency across the board to make it easier to implement integrative policies within particular programmes (MEMR, Summary of Jordan Energy Strategy 2020-2030, 2020) to meet the country's energy, sustainability and climate action objectives. However, there is still a need for further development.

Objectives and Methodology

Objectives

Through this study we seek to answer the main questions: what is the interlinkage between Jordan's clean energy ambitions and plans for social and economic development? What economic and social impacts do Jordan's RE efforts have on low-income HHs, local communities, and vulnerable groups? How can Community-Based Organizations (CBOs) support the implementation of policy actions and related programmes towards energy transition and social justice?

The preceding will also be used to demonstrate the reality of RE and its economic and social impact on local communities in Jordan by analysing:

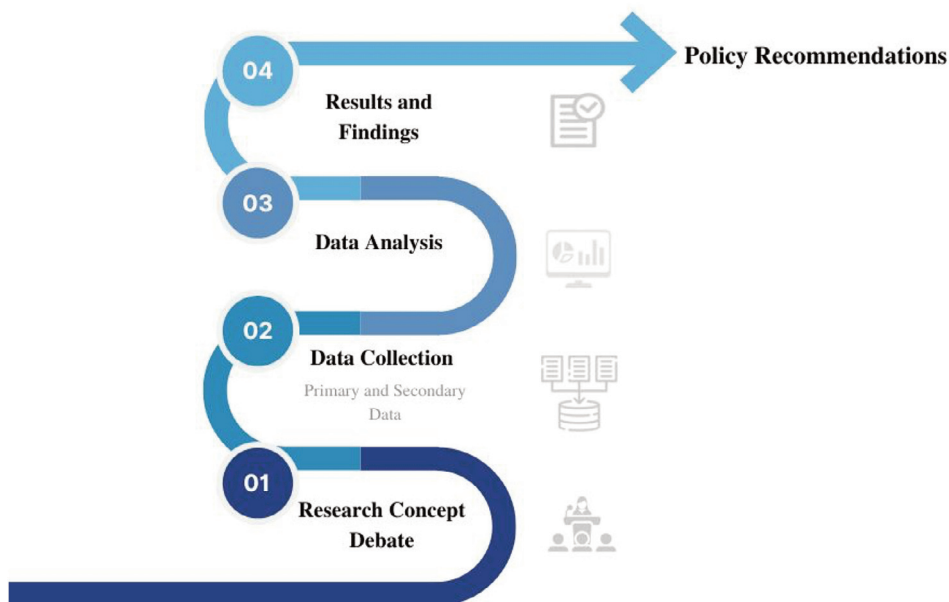
- The socioeconomic impact of energy transition.

- The achievement of social justice through the clean energy ambitions set with the country policies.
- The scaling up of affordable clean energy technology and systems.
- The role of CBOs to achieve social justice and development goals.

In an effort to represent the perspectives of all individuals involved, coming from a variety of backgrounds, with different experiences and perceptions, interviews with key stakeholders, survey findings, data evaluation, and analytics were carried out. This paper, based on sources that we consider to be reliable, gives general thoughts, formulates policy recommendations, and proposes actions towards social justice, equity and inclusivity through a sustainable development approach and energy transition.

Methodology

Figure 3. Research methodology



This study aims to highlight the reality of RE and its economic and social impact on local communities in Jordan by highlighting the socioeconomic impact, achieving social justice through clean energy transition policies, scaling up the affordable clean energy technology and systems, and elevating the role of the CBOs to achieve the social justice and development goals.

Our methodology progress began with the research concept debate, which was discussed at the EuroMeSCo Annual Conference event in Jordan, where important inputs were obtained from the attendees. Afterward, a list of potential stakeholders such as policy-makers and governmental entities, international non-governmental organizations (INGOs), Donors, CBOs, and the private sector was prepared to collect the required data, and this was achieved by consulting the stakeholders, carrying out key informative interviews and circulating a questionnaire to the stakeholders. The secondary data was collected through a literature review and desktop research. Consequently, the collected data was analysed, and a comprehensive quantitative and qualitative analysis was carried out. The paper will cover two case studies: *The Jordan Renewable Energy and Energy Efficiency Fund (JREEEF)* programmes in partnership with CBOs in Jordan and Rural Fills programmes.

The results and findings highlight the socioeconomic impact of Jordan's clean energy projects on local communities, vulnerable groups and host communities, and clarify the interlinkage between Jordan's social and economic development plans and the energy transition. As a result, a policy paper has been developed to scale up RE and energy efficiency to maximise the socioeconomic impact in Jordan.

Key stakeholders review

Following on from the feedback and comments received from the experts and the institutional representatives who participated in the EuroMeSCo Annual Conference in Amman, a key stakeholder list was identified. A series of key informative interviews and meetings were conducted in person/virtually with more than 12 key entities and around 19 key personnel, who responded to indicative interview questions structured in a questionnaire that helped to measure the existing social development plans and energy strategies as well as related policies and how they integrate the social dimension and justice through RE initiatives (Annex I features the detailed list of the interviewees).

The figure below shows the key stakeholder's architecture and identifications.

- **Policy-makers:** Setting up and promoting national strategies, policies and programmes related to sustainable development, energy transitions and social justice that help individuals, families and communities to fulfil their potential and to lead healthy, productive lives.
- **Implementing agency:** Sets programme budgets and plans based on the needs of stakeholder groups, data collection and economic analyses in response to the development goals, policies and strategies.
- **Market delivery partners:** Includes the stakeholders representing the INGOs, governmental authorities, private sector and CBOs required for its implementation.

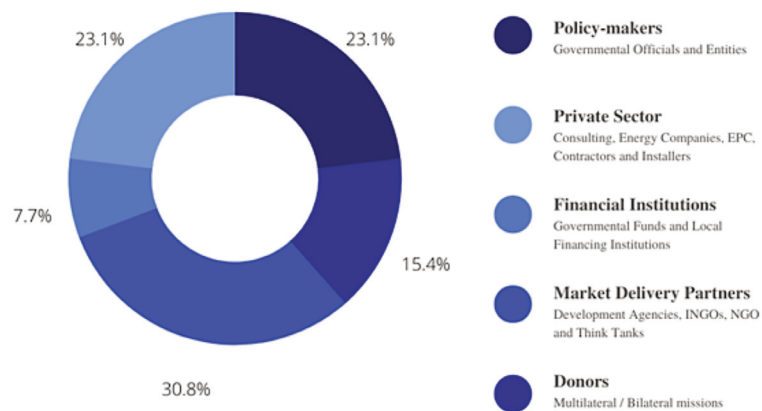
Figure 4. Key stakeholders



Key informative interviews questionnaire analysis

The figure below illustrates the percentage of the interviewee sample that was analysed.

Figure 5. Key informative interviewee - sample categorisation



Question 1: How would you rate Jordan's position compared to other countries on applying social development and justice policies?

According to the study, most respondents give Jordan's position in com-

parison to other nations on the implementation of social development and justice policies a score of 7-8 out of 10. They concur that Jordan established the policies, but they disagree over how effectively they have been implemented.

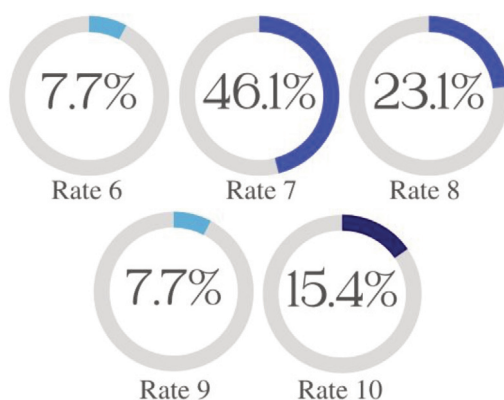
Figure 6. Policies in place



Question 2: How would you rate the interlinkage between Jordanian social development and justice policies with the SDGs?

Around 50% of those interviewed give the relationship between Jordanian social development and justice policies and the SDGs 7 out of 10.

Figure 7. Interlinkage between SDGs and social development plans



Question 3: From your own perspective, how has the interlinkage between Jordan's social and economic development plans been addressed through the energy transition plans?

The majority of decision-makers who participated in the survey and interviews stated "sectoral or national policies usually have already been formed. The proposed policy actions and framework include social, sustainable and economic development subjects; yet we may detect a gap in the levels of policy implementation and enforcement.

While market delivery partners stated that Jordan has energy strategies that include the diversifications of the energy mix, there is no clear plan for phasing out fossil fuel with renewables by 100% to achieve a natural energy transition. They also confirmed that, in general, social justice is not considered in the economic and energy plans as it should be. As a general observation, the policy-makers focus only on the job creation criteria for social justice. Moreover, they should think more about creating decent, long-term jobs. However, energy

policy-makers in Jordan have financial constraints on planning to solve debt primarily related to the energy sector.

Furthermore, the market delivery partners, mainly INGOs and Non-Governmental Organizations (NGOs), who responded to these questions, highlighted that several programmes were implemented by different donors or governmental agencies with different financial schemes and instruments, such as JREEEF's HHs programmes, Solar to the poor programme by Rural Fills Fund for national aid fund registered beneficiaries and other international donors intervention programmes. This served the needs of local communities in economically struggling areas as well as the host communities. These programs helped make sustainable energy affordable for families of all income levels.

The private sector representatives stated that Jordan does not have a clear energy transition plan for offsetting fossil fuel with RE as Jordan has financial constraints towards the energy sector where the energy policy-makers are trying only to solve the

financial debt issues on the Transition Company, where the energy strategies need to be designed in a way that would have an economic and social impact on all sectors and electricity end-users, such as transport, industry, tourism, health and education, water, trade, and so on.

Question 4: How have the clean energy programmes leveraged the socioeconomic impact on local communities, vulnerable groups or host communities?

The majority of the stakeholders interviewed, whether policy-makers, private sectors or market delivery, stated that the applied RE community governmental programmes and initiatives addressed clean energy adoption. They also emphasised that the implementation mechanisms need to be reviewed to measure how such mechanisms could address the communities' actual needs and how it could be reflected in the social development reality and social well-being. To ensure a smooth transition to clean energy, it is crucial to emphasise the necessity of expanding programmes for decentralised RE systems for HHs because of their direct connection to public finances as it reduces the cost of cross-subsidies paid by the government to one of the subsidized electricity bill groups.

Since it affects local families, especially women, and because there may be projects for these systems that create employment opportunities for young people in local private companies that carry out these projects in the governorates, the benefit of these implications is that they don't have a long-term impact on electricity costs. By achieving a just transition, creating jobs, and easing the burden of electricity costs for the targeted groups to meet their basic needs and lower poverty levels where it is aligned, the Clean Energy Programmes leveraged the socioeconomic impact on local communities, vulnerable groups, or

host communities (graduation from poverty).

Most policy-makers and market delivery partner representatives confirmed that to be unlikely because there are no specialised studies to look at the impact, and that these projects contributed to improving the living standards of families and empowering communities economically and socially. It is essential to have specialised studies to measure how much financing mechanisms improve living standards for families while considering how they directly support national development indicators, such as the reduced poverty indicators.

Financial institutions emphasized the necessity to evaluate the effectiveness of current financing instrumental policies. It was confirmed by representatives of donors' organizations that in order to construct it cohesively, it is necessary to present projects that are accompanied by social awareness campaigns for families on how the savings achieved can be included in the contribution to expenditures spending and priorities for families at the level of improving health or education, etc.

Question 5: In your opinion, how could the interlinkage be measured?

The majority of market delivery partners in the sample who responded to the survey emphasised that, because social justice can have many different meanings, it is crucial to include specific *Key Performance Indicators* when translating policies into actions for national programmes or initiatives, specifically energy-related programmes. They strongly advise that these indicators should include but not be limited to allocation of resources equitably, the availability of affordable clean energy, employment outcomes, empowerment of women and youth, economic growth, access to services and equity for targeted groups.

- Donors emphasize that social impact studies must be undertaken on the adopted policies or programs which they are to determine social well-being by considering the following aspects: The cost and availability of the services offered.
- How it improved living circumstances.
- The financial savings and how they have been applied to other basic requirements, including childcare, healthcare and education.
- Knowledge of the programmes' objectives and advantages.
- The effectiveness and influence of financial and auxiliary methods.
- The influence of job creation on societies (direct or indirect, the effect of providing a fertile environment for growth and how it supports local initiatives and facilitates technical procedures locally).

Case Study – Jordan RE community initiatives

The case selection technique

After performing a detailed analysis of current RE community activities taking place, we have chosen two government initiatives that are considered to be a direct response to the policy actions as well as to the recommendations of the key stakeholders, which are:

1. JREEEF HHs RE
2. Rural Fill provides solar to the poor

Each entity's mandates, programmes, initiatives and operational procedures are highlighted in the following section with a thorough description.

Different targets are involved in each case tackled. It focuses on varied degrees of poverty and weaker demographics in local communities that receive government aid through various methods.

As “poverty” is defined by the Department of Statistics as “the inability to provide the socially required minimum standard of living, which is a state of material deprivation, and its manifestations include low consumption of food, quantitatively and qualitatively, low health status, educational level, housing status, deprivation of possession of durable goods and other physical assets, loss of reserves or security to cope with difficult situations such as illness,” it is determined using “family expenditure.”

According to the Department of Statistics' most recent study on family income and expenditures, the absolute poverty rate among Jordanians was 15.7%, or 1.069 million people. The rate of (severe) poverty was 0.12%, or 7,993 people (2017-2018).

These programmes are designed to reduce the burden on low-income and poor families, lowering the costs associated with

energy bills and extending the segment of beneficiaries, whether from the JREEEF programmes or Rural Fills. This is done by utilising local energy sources for electricity generation and fulfilling the objective of shifting to clean, sustainable energy by better use of energy sources' contributions to the total energy mix.

The following parts of this section present a detailed analysis of the selected cases. Information and data were collected and gathered directly from the Ministry of Energy and Mineral Resources (MEMR)'s published reports and data, in addition to direct meetings, and interviews with the funding and programme implementers. A separate meeting was held with the Executive Director of JREEEF and the Head of Project Development Manager, and detailed data was provided for JREEEF's intervention for HHs. Also, an interview was held separately with the Rural Fills Director and the Programmes team leaders at the Ministry.

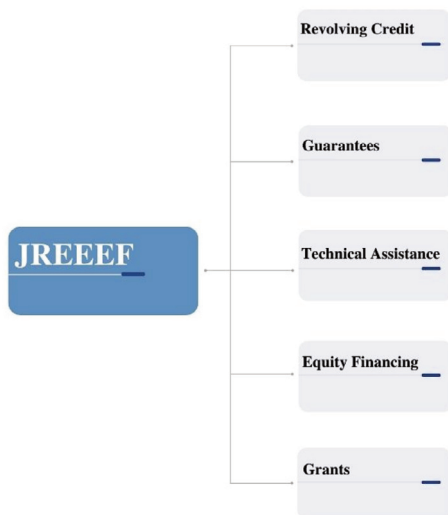
CASE Focus I – Jordan Renewable Energy and Energy Efficiency Fund (JREEEF)

JREEEF was established under *Regulation No. (49) (2015)*, issued under *Renewable Energy and Energy Law No. (13) (2012)* as an executive arm of the MEMR. The fund's objective is to provide the required funding to support the exploitation of RE sources and the rationalisation of energy usage, including small initiatives, by establishing and assessing programmes and projects that support these goals (JREEEF, 2020).

JREEEF's supporting mechanism: The Fund has created several financing windows and procedures in proportion to the programmes to fund these programmes

and projects, such as direct full grants or partial grants that vary between 30% and 50% “as needed” or through revolving loans given to various institutions. The Fund reached agreements with several donors to implement numerous initiatives across various sectors in collaboration with external donations (JREEEF, 2020).

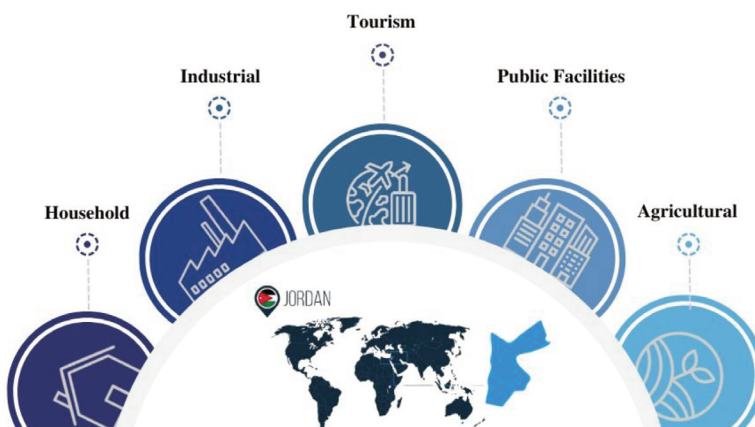
Figure 8. JREEEF's supporting windows and financing mechanisms



JREEEF's support and covered sectors: The Fund's strategic plan included several programmes and projects to support the most significant sectors that directly affect the national economy and lower energy costs for the productive sectors or in the lives of citizens, including the domestic sector, the agricultural sector, the industrial sector, the tourism sector, the education sector (schools), the government

buildings sector, and the sector of places of worship. It also aimed at spreading awareness and education in the field of rationalising energy consumption and improving energy efficiency in addition to RE systems through capacity-building programmes and specialised training for partners along with the agricultural sector, joint projects, associations, and CBOs (JREEEF, 2020).

Figure 9. JREEEF's programmes sectoral coverage



JREEEF's HH Programme Highlight: As emerges from the energy balance reported in a publication on the strategic objectives of the MEMR for 2021, the residential sector consumes roughly 1,520 thousand tons of oil equivalent, with a percentage of up to 3.8% for 2019. Sectoral distribution shows that this value represents 48% of the total electricity consumption, making it the second sector for final energy and electricity consumption. To accomplish this, the JREEEF aims to provide the necessary funding to contribute to the utilisation of RE sources and reduce energy consumption. The HH programme to help the residential sector by financing initiatives for using renewable energy applications and

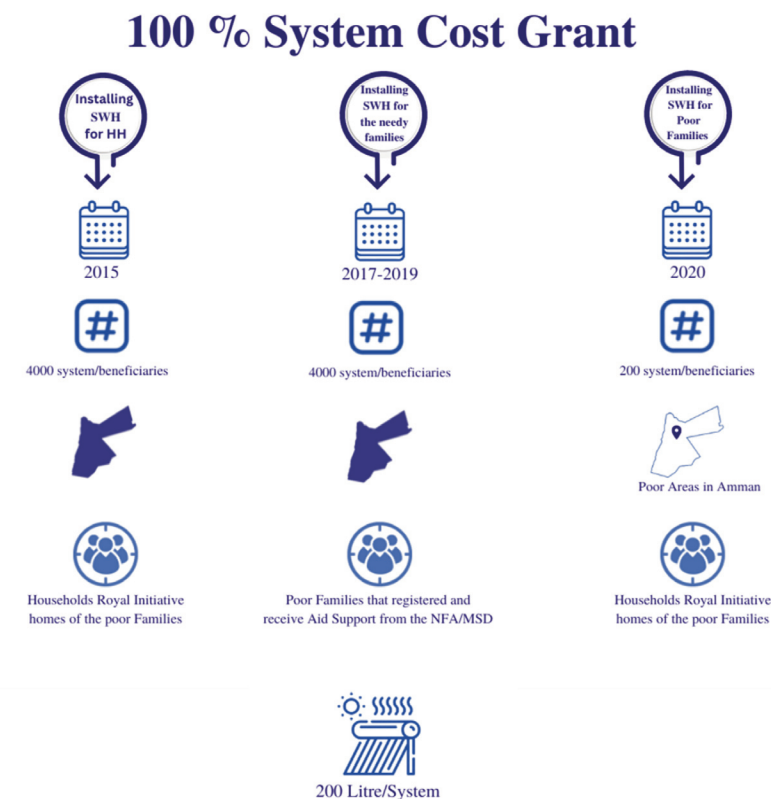
energy efficiency in reducing the final energy consumption in Jordan was included in the Fund's strategic plan (MEMR, Energy Facts and Figures, 2021).

Three main interventions for HHs were conducted in the framework of the JREEEF designed programmes, including the installation of Solar PV, the installation of Solar Water Heaters (SWH), replacing the lighting units with light-emitting diode (LED) efficient units, and the adoption of various financial instruments for their implementation. The figure below highlights the total progress achieved during 2015-2020 for each programme per capacity, system and unit.

JREEEF HHs Programme Outcomes 2015-2020:

- Technology solar water heaters installation – targeted poor families

Figure 10. Infographic 1



- Technology solar water heaters installation – targeted subsidised households' consumers.

Figure 11. Infographic 2

**50% System Cost Grant
50% Revolving Fund Scheme**



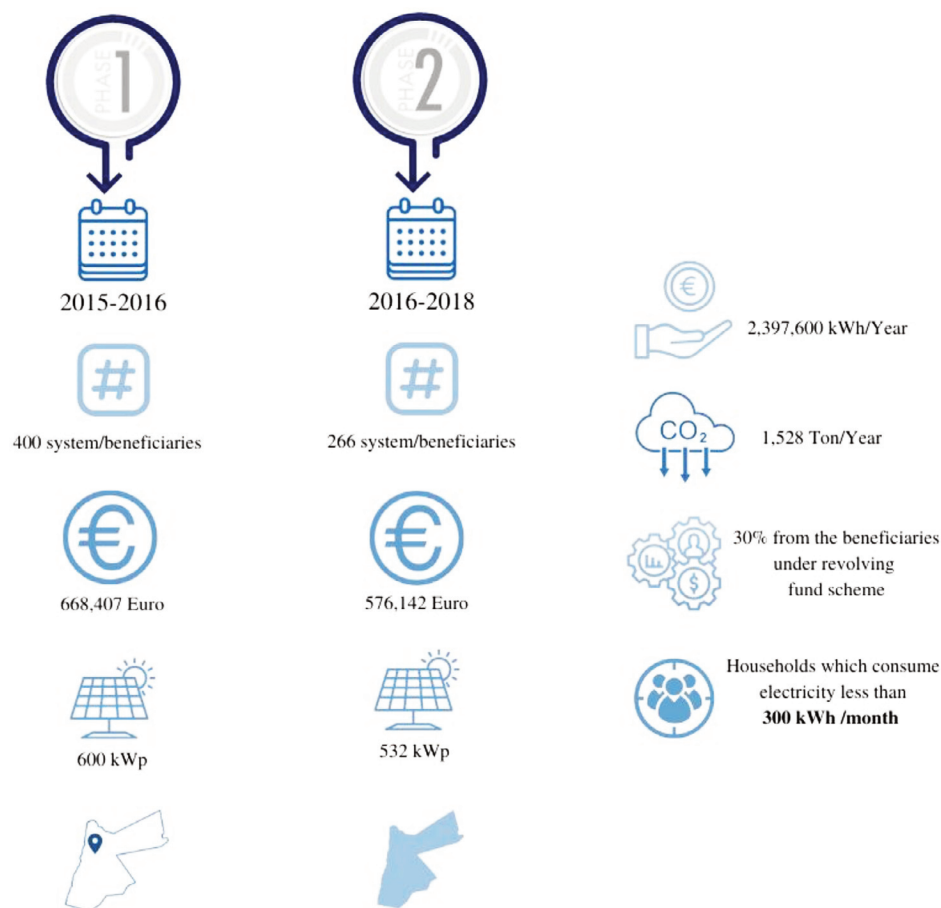
Figure 12. Infographic 3

**1. Soft Loans - Local Banks 0% Interest Rate and 30% System Cost Grant Support by JREEEF
2. Revolving Funds through Civil societies and CBOs in addition to 30% System Cost Grant Support by JREEEF**



Case Focus I – JREEEF solar PV programme Cost Benefit Analysis (CBA):

Figure 13. Infographic 4



The JREEEF/MEMR implemented a programme to support installing solar PV systems for the HH sector. This programme was implemented in cooperation with a CBO, which helps reach the target groups in all governorates of the Hashemite Kingdom of Jordan. The target groups of this programme are families with middle incomes whose electrical consumption is less than 300 kWh per month. Through the programme, they can install solar PV systems to cover all their electrical consumption, as the JREEEF provided a subsidy of 30% of the total cost of these systems to encourage them

on the transition to RE. Beneficiaries of this programme are:

- Middle-income target groups
- CBO as a financial window for the programme
- Energy service companies
- Government

Cost Benefit Analysis was conducted for this programme to define all benefits and costs with the payback period for each beneficiary. The table below summarises the programme, which was carried out in two stages of implementation:

Table 1. JREEEF's PV programmes

	Target beneficiaries: end-users who consume 300kWh/month			
	First programme 2015/2016	Second programme 2017/2018	Total	Unit
PSI	MASE	Kawar Energy Co	-	
Number of solar PV systems	400	266	666	Family
Installed capacity	1.5	2	3.5	(kWp/system)
Total installed capacity	600	532	1,132	(kWp)
Cost	1,114	1,083	-	(euros/kWp)
Total installed cost	668,407	576,142	1,244,549	(euros)
GOV contribution	30%	30%	-	%
HH contribution	70%	70%	-	%
GOV contribution	200,522	172,843	373,365	(euros)
HH contribution	467,885	403,300	871,185	(euros)
Partner CBOs	22	22	44	CBOs
AAF paid by HH to CBO	51	50	101	(euros/system)
Total AAF paid by HH to CBO	20,370	13,169	33,539	(euros)
Total GOV contribution	200,522	172,843	373,365	(euros)
Total HH contribution	488,255	416,469	904,724	(euros)
Total programme cost	1,278,088	(euros)		

Cost: The programme started in 2015 and ended in 2018. It reached 666 families with a capacity of 1.5 Kilo Watt Peak (kWp) PV system for each family in the first phase, and 2 kWp PV system for each family in the second phase. The cost of each kWp was around 1,099 euros, and the total cost of installed systems was 1,244,549 euros. Target families who consume 300 kWh per month and below pay only 70% of the system cost, as the JREEEF subsidised the remaining 30%.

Local civil society organizations (CSOs) and CBOs were included in this initiative as agents for offering a service and publicising the programme. The organisations' handling of the financial and administrative procedures for the groups who were eligible to apply. On each system application, these firms impose a minor fee (the applying administrations fee, or AAF), typically around 50 euros. When these fees are charged, organisations are able to increase the services they offer to their communities.

33,539 euros total were awarded to 80 different CBOs as part of the AAF. The programme's overall price tag was 1,278,088 euros.

Benefit: After implementing this programme, the target groups received zero electricity bills as the sun paid the monthly bill. The electricity bill that should be paid by end-users who consume 300 kWh/month is 16 JOD ~ 20 euros, and it costs the government 36 JOD ~ 45 euros, so the government subsidises approximately 20 JOD ~ 25 euros each month. Yearly savings were calculated after the implementation of PV systems, which shows that savings occurred on the target group's bill and the government as the electricity tariff is subsidised for the target groups who consume 300 kWh per month. The table below shows the yearly savings on target groups of HHs and yearly savings on government with total programme savings of 287,712 JOD per year ~ 361,127 euros per year:

Table 2. Total savings

Total savings after implementing the PV programme / JREEEF	
Total electricity saving on HH (JD/year) / (euro/year)	Total GOV subsidised savings (JD/year) / (euro/year)
122,757 / 154,081	164,955 / 207,047

Cost Benefit Analysis: Analysis below period for this programme, which has a life-time of 25 years: shows the cost, benefits and payback

Table 3. Cost Benefit Analysis - JREEEF's programmes

Costs	YEAR	1	2	25
System cost on GOV		372,974 euros		
System cost on HH		870,272 euros		
Total AAF paid by HH to CBOs		33,438 euros		
Total costs		1,276,683 euros	0 euros	0 euros
Benefits	YEAR	1	2	25
Electricity saving on HH		154,081 euros	154,081 euros	154,081 euros
GOV subsidised savings		207,047 euros	207,047 euros	207,047 euros
Total benefits		361,127 euros	361,127 euros	361,127 euros
Totals	YEAR	1	2	25
Net benefits (costs)		(915,556 euros)	361,127 euros	361,127 euros
Cash flow		(915,556 euros)	361,127 euros	361,127 euros
Cumulative cash flow		(915,556 euros)	(554,429 euros)	7,751,502 euros
Payback period (in years)				
Total project payback period (in years)		3.54		
Payback period on GOV		2.42		
Payback Period on HH		4.36		

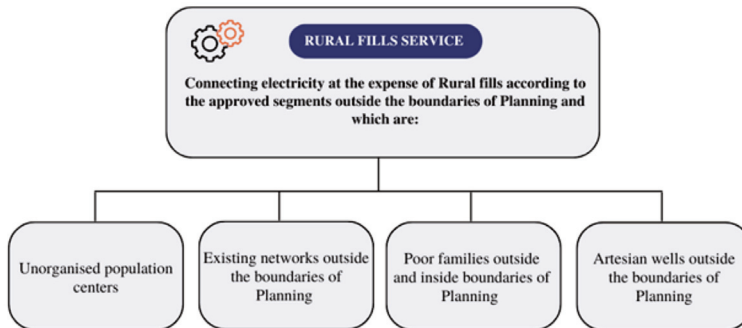
CASE Focus II – Rural Fills Community RE Project

The foundation of *Rural Fills* under the 1977 electric tariff is an element of the cost of electricity and not a direct or indirect tax. The MEMR united the Rural Electrification Project to establish the Rural Electrification Directorate (MEMR, Rural Fills Projects, 2019).

Rural Fills RE programmes – Solar to the poor: In 2019, the MEMR launched

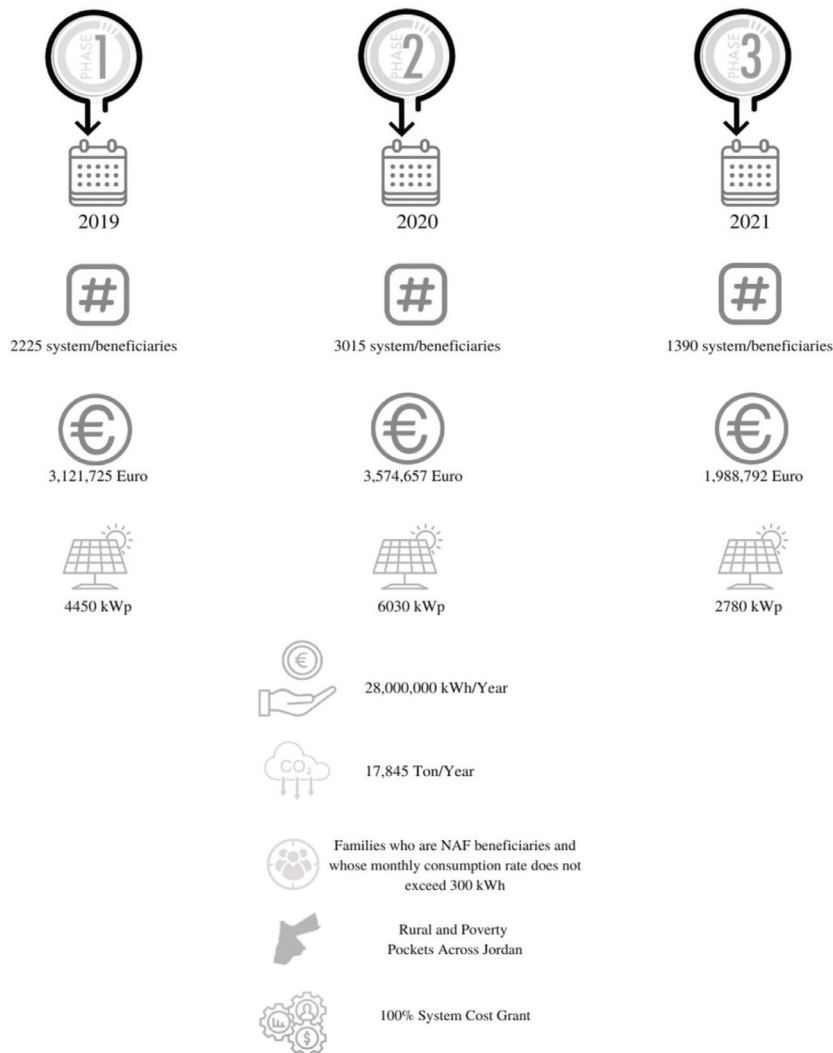
the *Solar PV installation* project with the network of homes of poor families and beneficiaries of the *National Aid Fund (NAF)*. The project is funded by Rural Fills, deducted from the electricity bill, with annual revenues of up to seventeen million dinars. The cost of installing these systems is one thousand dinars per house, while this project has provided two hundred job opportunities for the people of the villages (MEMR, Rural Fills Projects, 2019).

Figure 14. Rural Fills services



Case Focus II – Rural Fills Solar PV programme Cost Benefit Analysis:

Figure 15. Infographic 5



The *Rural Fills / MEMR* implemented a programme to support installing solar PV systems for the HH sector. The target groups of this programme are families with low incomes whose electrical consumption is less than 200 kWh per month. Through the programme, the government supports 100% of installing solar PV systems to cover low-income groups' electrical consumption. Beneficiaries of this programme are:

- Low-income target groups
- Energy service companies
- Government

CBA's were conducted for this programme to define all benefits and costs, with the payback period for each beneficiary. The table below summarises the programme, which was implemented in three different phases:

Table 4 Rural Fills PV programmes

Rural Fills / MEMR PV programmes					
Target Beneficiaries: end-users who consume 200kWh/Month					
	First phase (2019)	Second phase (2020)	Third phase (2021)	Total	Unit
PSI	Private Energy Companies			-	
Number of solar PV systems	2,225	3015	1390	6,630	Family
Installed capacity	2	2	2	4.0	(kWp/system)
Total installed capacity	4,450	6030	2780	7,230	(kWp)
Cost	702	593	715	-	(euros/kWp)
Total installed cost	3,121,725	3,574,657	1,988,792	8,685,175	(euros)
GOV contribution	100%	100%	100%	-	%
HH contribution	0%	0%		-	%
GOV contribution	3,121,725	3,574,657	1,988,792	8,685,175	(euros)
HH contribution	0	0	0	0	(euros)
Partner CBOs	0	0	0	0	CBOs
AAF paid by HH to CBO	0	0	0	0	(euros/system)
Total AAF paid by HH to CBOs	0	0		0	(euros)
Total GOV contribution	3,121,725	3,574,657	1,988,792	8,685,175	(euros)
Total HH contribution	0	0	0	0	(euros)
Total programme cost				8,685,175	(euros)

Cost: The programme started in 2019 and ended in 2021. It reached 6,630 different families with a capacity of 2 kWp PV system for each family. The cost of each kWp was 702 euros in the first phase (2019), 593 euros in the second phase (2020), and increased to 715 euros in the third phase due to the COVID-19 pandemic.

The total programme cost was 8,685,175 euros.

Benefit: After implementing this programme, the target groups got zero electricity bills as the sun paid the monthly bill. The electricity bill that should be paid by end-users who consume 200 kWh/month

is 8 JOD ~ 10 euros, and it costs the government 24 JOD ~ 29 euros, so the government subsidises approximately 16 JOD ~ 20 euros each month. Yearly savings were calculated after the implementation of PV systems, which shows that savings occurred on the target group's bill and the government as the

electricity tariff is subsidised for the target groups who consume 200 kWh per month. The table below shows the yearly savings on target groups of HHs and yearly savings on government with a total programme savings of 1,909,440 JOD per year ~ 2,345,375 euros per year:

Table 5. Total savings

Total savings after implementing the PV programme / Rural Fills

Total electricity saving on HH (JD/year) / (euro/year)	Total GOV subsidised savings (JD/year) / (euro/year)
649,210 / 797,428	1,260,230 / 1,547,947

Cost Benefit Analysis: Analysis below shows the cost, benefits and payback

period for this programme, which has a life-time of 25 years:

Table 6. Cost Benefit Analysis – Rural Fills programmes

Cost Benefit Analysis for Rural Fills PV programme

System cost on GOV		8,648,557 euro		
System cost on HH		0 euro		
Total costs		8,648,557 euro	0 euros	0 euros
Benefits	YEAR	1	2	25
Electricity saving on HH		797,428 euros	797,428 euros	797,428 euros
GOV Subsidised savings		1,547,947 euros	202,615 euros	202,615 euros
Total benefits		2,345,375 euros	1,000,042 euros	1,000,042 euros
Totals	YEAR	1	2	25
Net benefits (costs)		(6,303,183 euros)	1,000,042 euros	1,000,042 euros
Cash flow		(6,303,183 euros)	1,000,042 euros	1,000,042 euros
Cumulative cash flow		(6,303,183 euros)	(5,303,141 euros)	17,697,835 euros
Payback period (in years)				
Total project payback period (in years)		3.69		

The Jordanian Dinar to Euros Average Exchange Rate Based on the Year Ref-

erence: (Exchange Rates, 2006 - 2022).

Findings

This programme aims to reach the target beneficiaries who cannot afford the electricity bill each month and to maximise the socioeconomic impact of PV system installation on local CSOs and energy service companies, which could create direct and indirect jobs in Jordan governorates.

After the cost-benefit analysis, a survey for the beneficiaries was conducted and it summarised that the socioeconomic impact of the programmes is as follows:

Target groups in HH

- Obtaining a zero-electricity bill for target families.
- Most of the target families used the savings for learning purposes.
- Spreading the concept of clean energy among the family members.

Local civil society organizations

- Involvement of CSOs in sustainable programmes.
- Improve their role in community services.

- Empower CSOs to involve them in public-private sector programmes.

Energy sector companies

- Growth of energy service companies.
- Launch new energy start-ups.
- Create direct and indirect jobs in different areas for youth and women.

Government

- Promote the concept of partnership between the public and private sectors (PPP).
- Reduce the cost of subsidies on electricity tariffs.
- Maximising national RE generation in the energy mix helps reach the country's targets.

Technology

- Harnessing modern energy technologies to serve communities.
- Technological development leads to an increase in the number of target group beneficiaries.

Conclusion and recommendations

The section below concludes a set of policy recommendations that cover seven areas that are supposed to support:

The implementation of policy actions

Long-term planning and adoption: The adoption of policy actions with long-term responsibilities for ministerial or decision-making and executive level persons to stay for at least four years to be able to plan, implement and monitor the impact is very beneficial for stable and clear policy and regulations.

Social Dimension:

- When formulating policies, it is crucial to focus more on the social aspects than only the technical details. It is necessary to have more knowledge on how these strategies might boost economic growth through earnings, sources of support, and increasing prosperity.
- There is no clear-cut answer to whether social considerations were taken into account while developing government policies, notably in the fields of energy and sustainable economic growth. Because the energy industry is associated with financial determinants, which occurs in most Middle Eastern nations, not just Jordan; and because social impacts are prioritised when evaluating economic and social impacts, the financial aspect takes precedence over the social one.

Developing policies using social credentials data and real and responding to community needs:

- The policy must be grounded in socially significant data, especially gathered from women, young people, and industries utilising local expertise to

create effective policy. Decision- and policy-makers may carry it out through community politics and events. Before forming any policy or strategy, policy-makers should rely on general and social justice assessments.

Continuous measurement and evaluation:

Policy-makers should give more consideration to the goal of new policies when creating them, and the targeted groups should include specific key performance indicators (KPIs) that measure the impact and its type, such as the impact on job creation, excess disposal income, and the environment, as well as the factors that would support achievement of these KPIs.

Policy creation process and inclusiveness:

Strengthen the involvement of all key stakeholders in the development of the policies and not be limited only to the actions and execution of its programmes.

Interlinking between programmes and socioeconomic impact and social justice in energy transition

Planning for the transition to clean energy and integrating social justice goals:

Despite maintaining a clear focus on a seamless energy transition towards dependency on clean energy sources within a clear and realistic energy transition plan, many aspects of society must be protected from the effects of laws and regulations that have an impact on them. To enhance social justice and inclusion in energy planning and policy activities, social justice policy planning must be founded on verifiable, factual information. It must be created using reliable and accurate data. The progress of economic standing, which affects other crucial parts of HH lives, like education and health, should be the actual goal for implementing clean energy programmes in society.

Formalisation of the policy to respond to each area's needs:

On a national level, uniform policies must be established. Nevertheless, social justice can be achieved by investigating how to create policies based on the crucial needs of each region or governorate as determined by its particular characteristics. These policies may result from climate and the type of economic activity: tourism, educational, commercial, industrial, etc., location, and poverty level.

Quantifying the social justice indicators:

A clear role of social justice can have a variety of unique dimensions, and key indicators must be determined for the energy strategy and policy measures. The equitable allocation of resources should be one of these measures, but there should be others. Access to reasonably priced clean energy, employment rates, job creation, poverty level, degree of youth and women's emancipation, and economic expansion, among other factors.

Continuous evaluation of the impact of RE initiatives on social justice aspects:

- This is necessary to carry out social effect analyses on the implemented policies or programs for evaluating: The access and affordability of the services provided.
- How it enhanced living conditions.
- The financial savings and how it has been reflected in other essential needs, such as education, healthcare, childcare, etc.
- Awareness level of the programmes and their benefits.
- The impact and the efficiency of financial and supporting mechanisms.

Private sector engagement policy programmes.

Engaging the private sector:

The ultimate transformation of the energy industry can only take place through a partnership between the public and private sectors. This needs to be done at the level of planning, management and implementation. A partnership with the private sector is crucial in energy transition since it is interconnected with all other sectors, is perceived as the sector most significant to employment, and energy prices are primarily correlated with improving competitiveness. Every time there is a need for economic development, it is essential to increase private sector involvement and support it to achieve the desired economic development with more active roles based on a defined framework and participation. Jordan has made significant strides toward establishing business partnerships. The scope of this partnership must nevertheless be expanded in the following ways:

- *Policy formulation:* It is very important to engage and involve the private sector from the early stage of the policy design and not limit its role in responding to the action programmes, including it in the planning process, not just in executing policies about the energy sector and connecting them to prospects for economic growth.
- *Enable the private sector freedom and flexibility to create more social justice through regulated investment models, such as:*

Scaling up initiatives towards massive investment for RE community projects maximises the use of RE projects for families and nearby communities; programmes are being scaled up toward significant investment in community-based RE projects. When designing and implementing programmes with longer dur-

ations of up to five years and increasing the number of installed systems to include more families, the government can design and implement policies that encourage the use of clean energy applications and give the private sector freedom and flexibility. This could be done by exploring the management model and making the case for these policies in the public sector. This would encourage governorates to attract more investment in creating RE systems, maximising economic development for the local communities by providing them with access to new job opportunities nearby. This might help strike a balance between the requirement for social justice in development and accessibility to services and employment opportunities.

Government involvement in RE community initiatives may differ: For instance, it might use decentralised application models other than rooftop ones, i.e., by providing land and allowing the construction of private RE power plants that would supply the electricity generated to the communities, as well as by setting up the necessary administrative, financial and technical procedures for it.

- Disseminate and announce policies and plans:

There is a real necessity to keep the private sector informed and engaged by sharing updates regarding the trends and policies related to the energy sector through the various platforms and umbrellas available.

Job creation and decent work

Just transition and decent jobs policy planning:

Working on energy and social development policies for creating decent and long-term job opportunities. This could be achieved through the following:

- Setting policies that consider how young people and women in the community might be impacted by training and empowerment regarding their ability to fill direct employment opportunities or assume leadership positions.
- Emphasising implementing policies will educate students and recent graduates, foster entrepreneurship in the project's target regions, and increase job opportunities for those working in Jordan's RE and energy efficiency industries.
- Working to support local efforts and initiatives and streamline technical procedures to create an environment conducive to the growth of Jordan's essential RE sector.

Employment opportunities via private sector participation:

Maximising project size is essential for the private sector to establish businesses in the governorates and provide residents with employment possibilities. In the governorates, where the private sector is the primary employer due to economic constraints and limited public employment generation options, the clean energy projects will strengthen and support the sector in creating employment opportunities.

Community-Based Organization participation.

Bridging the gap between the politician's and the local community's needs:

It is crucial to work on bridging the gap between the politician's and the local community's needs. More social justice could be achieved by being more connected and aware of the community's needs and living conditions, working with civil societies other than the CBOs, facilitating the engagement with different

levels of stakeholders in the communities in technology transfer and access to affordable clean energy systems.

Improving and strengthening capacity:

For greater impact plus successful implementation of policy actions and to target the inclusion of community groups' technical, administrative and financial capacity of the CBOs as they are mobilisers and enablers for RE community programmes in supporting access for the targeted vulnerable groups. At the same time, we can work with the CBOs through NGOs and CSOs.

Enabling the CBOs to carry out their role:

They should indeed maximize their contribution to promoting clean energy applications in local communities and raising awareness of them, as CBOs need to be taken into consideration as a foundation and organizations that can operate independently are the main drivers for carrying out RE community activities. where they could play a significant part in delivering and fostering the achievement of fair access to programs and services within community areas. This could be accomplished by helping in the promotion of clean energy applications and their advantages, boosting and enhancing trust between governmental programmes and the citizenry, and working in coordination with all stakeholders, including support programmes, government agencies, businesses, financial institutions, community beneficiaries, and CBOs can also serve as a campaign manager for neighbourhood marketing initiatives and make a big difference in raising public awareness about the advantages of employing RE technologies. CBOs can help justice by managing the application programme's service delivery process and submitting support request letters.

Women and youth empowerment

Evaluation and assessment are required:

Evaluate the increase in women's economic engagement in energy strategies and policies. Work must be done to close the gap caused by the total exclusion of women and young people as well as to achieve equitable representation of these two important groups in society, to meet the true needs of society and participate in the development and implementation of pertinent policies and programmes.

Qualifying youth and women:

Given the significance of the youth's and women's roles, it is essential to work on empowering them through a variety of courses and activities that will increase their capacities and equip them with knowledge and practical experience to utilise their talents and energies and employ them in serving the local community in the field of sustainable energy. Women and youth empowerment could be a useful component in achieving the development that they seek to achieve in the clean energy sector. Youth and women must be trained, prepared, given the time and place to engage with decision-makers about society's needs, and included in creating policies that fairly represent them as one of the instruments used to achieve social justice.

Technology transfer and access to affordable clean energy systems

Availability of low-cost and clean energy systems:

Jordan has a great opportunity to capture the new clean technology and adopt it for the community's benefit, which allows the potential for research and development to be able to work with it. When the price is lower, clean energy technology is more cost-effective than alternative technical options, which will

help realise social justice objectives. Plans for the energy transition might be expedited by relying on technology and making it more accessible. This will promote international cooperation and help resolve many of the current technical difficulties to examine cost consolidation solutions while taking into consideration the kind and extent of expenditures.

Technical capacity-building and awareness:

We generally have a strong understand-

ing of clean energy technology, yet we still need the political will to integrate academic knowledge to identify and select the system with the best standards and qualities. To improve the project implementers' capacity to select the best technology and specifications, it is crucial to work on their technical qualifications and, on a community scale, employ community awareness initiatives to educate people about the advantages and applications of sustainable energy technologies.

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Annexes

Annex I – List of Interviewees

No.	Organisation	Contact Person	Position	Email
1.	Consolidated Energy & Economic Engineering Co	Mansur Murad	General Manager	murad.m.w@cthreee.com
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Glossary of acronyms

AAFs	Applying Administrations Fees
CBA	Cost Benefit Analysis
CBOs	Community-Based Organizations
EE	Energy Efficiency
EuroMeSCo	Euro-Mediterranean Research, Dialogue, Advocacy
GHG	Greenhouse Gas
HH	Household
IRENA	International Renewable Energy Agency
JREEEF	Jordan Renewable Energy and Energy Efficiency Fund
KPIs	Key Performance Indicators
kWh	Kilo Watt Hour
kWp	Kilo Watt Peak
LED	Light-Emitting Diode
MEMR	Ministry of Energy and Mineral Resources
MOPIC	Ministry of Planning and International Cooperation
MSD	Ministry of Social Development
NAAF	National Aid Fund
NDCs	Jordan's Nationally Determined Contributions
NFSS	National Food Security Strategy
NSP	National Social Protection Strategy
PSI	Private Sector Installer
RE	Renewable Energy
SDGs	Sustainable Development Goals
SEED	Sustainable Energy and Economic Development
SPV	Solar Photovoltaic
SWH	Solar Water Heater
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
VNR	Voluntary National Report

