Internationally Funded Projects
Ministry of Electricity and Energy

الجمهورية اليمنية
وزارة الكهرباء والطاقة
Ministry of Electricity and Energy

"PIU OF INTERNATIONALLY FUNDED PROJECTS: ANNUAL REPORT 2024"

PIU Annual Report – 2024 :

"Towards a Sustainable and Resilient Energy Future for Yemen."

"Aden, Republic of Yemen"

"A comprehensive overview of achievements, challenges, and strategic objectives for advancing Yemen's energy infrastructure."

WELCOME

COMPANY ANNUAL REPORT 2024

These objectives highlight the **PIU's commitment to addressing Yemen's energy challenges through strategic initiatives, collaboration, and innovation.**

PIU Profile
INTRODUCTION

The Project Implementation Unit (PIU), headquartered in Aden, Yemen, operates under the Ministry of Electricity and Energy. In collaboration with international donors and local experts, PIU's mission is to enhance Yemen's energy infrastructure through projects that focus on sustainable growth, renewable energy, and resilience in critical infrastructure. This annual report presents a summary of 2024 achievements, budget allocations, and operational enhancements aimed at building a sustainable and reliable electricity sector in Yemen.

The Project Implementation Unit (PIU), operating under Yemen's Ministry of Electricity and Energy, is responsible for managing internationally funded projects aimed at enhancing energy access, infrastructure, and sustainability. With a focus on renewable energy, rural development, and institutional capacity building, the PIU plays a pivotal role in advancing Yemen's energy sector and fostering long-term growth and resilience.

"Enhancing energy access, infrastructure reliability, renewable solutions, rural development, and institutional capacity, gas power stations and the expansion of transmission and distribution networks".

TABLE OF

CONTENTS

OUR WELL EVALUATED

FACILITY

The assessment conducted by AFKAR Consultant for UNOPS focused on evaluating and enhancing the operational capacity of the PIU. It included comprehensive reviews of the PIU's financial management, procurement processes, and project monitoring frameworks. This process aimed to align the PIU's practices with international standards and improve its ability to manage donor-funded projects effectively.

Assessed, Developed, organized, and empowered

Key objectives include enhancing operational efficiency, aligning with international standards, and addressing gaps in project implementation frameworks. The contract emphasizes collaboration with PIU stakeholders to deliver actionable recommendations for sustainable development and energy infrastructure projects.

The PIU is based in the temporary capital of Aden and is tasked with managing all internationally funded electricity sector projects in Yemen. This includes project planning, implementation, supervision, monitoring, and daily administration. The unit is led by a Director-General who oversees the work of six main departments: the Technical Department, the Procurement and Contracts Department, the Financial Affairs Department, the Administrative Affairs Department, the Environmental and Social Affairs Department, and the Planning and Monitoring Department.

Post Assessment

Following the comprehensive assessment conducted by AFKAR for UNOPS, the PIU leveraged its enhanced operational capacity to collaborate with the World Bank and UNOPS on key studies shaping Yemen's energy future. These include the Mini-Grid Solar Study under YEEAP II, assessing technical, regulatory, and market frameworks for decentralized energy solutions, and the "Opportunities in the Power Sector for Private Investors" study, which identifies pathways for private sector involvement in energy projects. Additionally, the PIU actively contributed to reviewing the Off-Grid Solar Market Assessment by UNOPS, offering valuable insights to scale renewable energy solutions in Yemen.

ABOUT OUR PIU

Implementing Projects

The Project Implementation Unit (PIU) is spearheading key initiatives to enhance Yemen's energy infrastructure, including the 400 MW Marib Gas Power Station, supported by the Kuwait Fund, and the "Scaling Up Solar Energy Applications in Yemen" project, delivering 16 MW of solar power across four locations in Lahj Governorate with $13.8 million from China. Other notable projects include the Second Yemen Integrated Urban Services Emergency Project and Yemen Emergency Electricity Access Project Phase II (RY-EEAP-II), both funded by the World Bank and implemented by UNOPS. Additionally, private sector partnerships, supported by IFC and UNDP, are advancing 52 MW solar projects across four governorates (first phase). These initiatives underline the PIU's dedication to sustainable energy solutions.

Pursuing the Establishment of a Laboratory

The Solar Energy Laboratory, established under Yemen's PIU, is dedicated to advancing renewable energy technologies through research, quality assurance, and technical training. It focuses on testing solar panels, inverters, and batteries to ensure compliance with international standards while fostering innovation. Key activities include performance testing, durability assessments, and developing strategies for integrating solar energy systems with the national grid. Through collaboration with research institutions and organizations, the lab aims to enhance local expertise and align practices with global standards. This initiative supports Yemen's sustainable energy practices, contributing to energy independence and long-term environmental goals.

Preparing Studies

In 2024, the PIU conducted pivotal studies to advance Yemen's energy infrastructure. The Off-Grid Study focused on identifying viable renewable energy solutions for remote areas, ensuring access to sustainable electricity. The Mini-Grid Study, developed with UNOPS, explored cost-effective localized energy networks to support rural electrification. The Master Plan Study, conducted in collaboration with international consultants, outlined a comprehensive roadmap for optimizing energy generation, transmission, and distribution across Yemen. Additionally, the PPA Study formulated contractual frameworks to engage private sector investments in renewable energy projects, fostering sustainable development and energy independence.

"We have consistently focused on building strong, collaborative partnerships with international donors, emphasizing transparency and alignment with global priorities to drive sustainable energy solutions and transformative development in Yemen."

The Yemeni government, supported by the UAE, Saudi Arabia, the World Bank, UNDP, and IFC, is advancing renewable energy through landmark projects such as Aden's 120 MW solar power station and planned 100 MW wind power facilities. Collaborative efforts include capacity-building initiatives, a renewable energy framework, and private sector investments in solar plants in Abyan, Al-Mahra and other governates, marking significant progress toward energy sustainability by 2030.

- ENVIRONMENTAL IMPACT

CO_2 REDUCTION

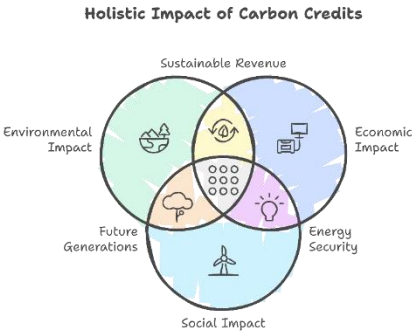
" By registering the solar PV project under a recognized carbon credit program, the Ministry of Electricity can unlock substantial financial resources to fund renewable energy projects. This initiative not only aligns with the national vision for sustainable development but also positions the country as a leader in combating climate change."

Study on CO_2 Emission Reduction Using a Solar Photovoltaic Power Plant

three different scenarios for grid emission factors: diesel-dominated grids, gas-dominated grids, and mixed-source grids (coal, gas, and diesel). Additionally, the study includes a detailed analysis of the plant's performance during October 2024, based on real data and estimations for the energy production and reduced CO_2 emissions for all circuits. The findings emphasize the role of solar PV in mitigating greenhouse gas emissions and highlight the variations in CO_2 reduction calculations based on different grid emission assumptions.

CO_2 Reduction

Diesel-dominated grid achieves the highest CO_2 reduction at 43.5%, reflecting the significant impact of replacing diesel-generated electricity. The Gas-dominated grid contributes 27.9%, demonstrating solar PV's role in lowering emissions from cleaner energy sources. The Mixed-source grid accounts for 33.6%, showcasing solar PV's effectiveness across diverse energy mixes. These figures highlight solar PV's capacity to significantly reduce CO_2 emissions across all grid types.



Annual Production of 120 MW and 25-Year Lifecycle Analysis

The solar PV plant has an annual production of 242,717.52 MWh. Over a 25-year project lifecycle, the total energy produced is:

Total Energy = 242,717.52 MWh × 25 = 6,067,938 MWh.

CURRENT PROJECTS AND INITIATIVES

The PIU is actively managing several high-priority, internationally funded projects to address the country's electricity needs and infrastructure development. These projects focus on energy generation, infrastructure rehabilitation, and expanding access to electricity in underserved regions. Below are the key projects currently being implemented:

About the Marib Gas Station Maintenance Project.

The Marib Gas Power Station, located in Marib Governorate, is a critical component of Yemen's energy infrastructure, with a designed capacity of 339 MW, which can increase to 400 MW during winter due to lower temperatures enhancing performance. Currently, the station supplies the governorate with 145-150 MW using two turbines and has the capability to provide up to 220 MW if the demand arises. The third turbine, currently kept as a backup due to a minor issue, ensures operational resilience in case of turbine failure. Efforts to restore its operations, supported by funding from the Kuwait Fund for Arab Economic Development, underscore its strategic importance in stabilizing Yemen's energy supply. The station plays a vital role in reducing power outages, improving energy access for critical services and households, and decreasing reliance on imported fuels, thereby contributing to economic development and energy reliability.

About the Scaling Up Solar Energy Applications in Yemen

The "Scaling Up Solar Energy Applications in Yemen" project, funded by a $13.8 million grant from the People's Republic of China, will initially be implemented across four locations in Lahj Governorate. The first phase includes installing solar power plants with capacities of 6 MW in Tur Al-Baha, 4 MW in Ras Al-Arah, 4 MW in Al-Madharibah, and 2 MW in Sha'ab. This project aims to benefit over 320,000 people, incorporating energy storage systems, enhanced electricity networks, and support for schools, healthcare facilities, and agricultural activities. It fosters sustainability through public-private partnerships and community capacity-building, setting the stage for Yemen's transition to renewable energy.

MEET OUR TEAMWORK

OUR TEAM

PIU'S ORGANIZATIONAL STRUCTURE

Administrative and Finance Departments

oversees budgeting, financial reporting, and resource management, ensuring compliance and operational efficiency.

Technical Engineering and Monitoring Departments

Manages project designs, supervision, and quality assurance for infrastructure projects. Additionally, it Oversees project evaluations, progress tracking, and alignment with strategic goals.

Procurement Department

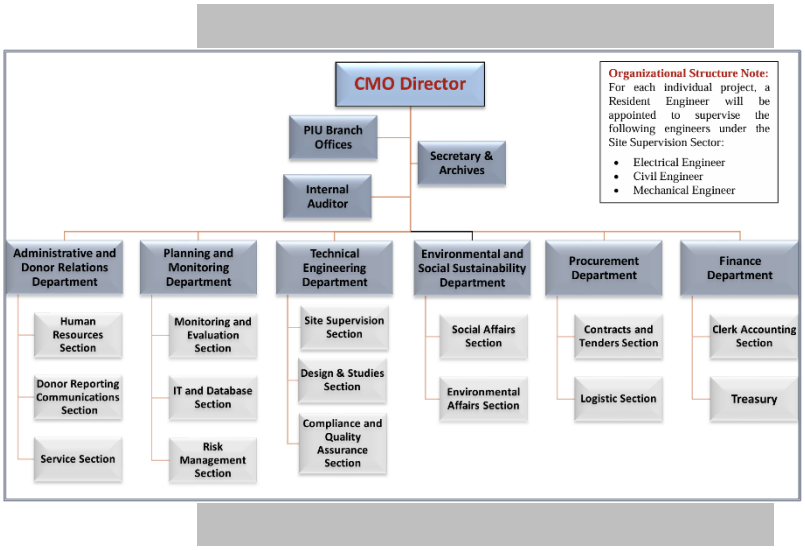
Handles tenders, vendor selection, and contract management to ensure transparent and efficient acquisition of goods and services.

Environmental and Social Sustainability Department

Oversees environmental compliance, social impact assessments, and community engagement to ensure projects align with sustainable development standards.

ABOUT OUR

EMPLOYEES



The Project Implementation Unit (PIU) is structured with a comprehensive organogram to ensure streamlined operations and adherence to international and governmental standards. The Steering Committee leads the unit and includes key stakeholders such as the Minister of Electricity and Energy, representatives from finance and planning ministries, and directors from the electricity and rural electricity authorities. The core team is led by the General Director of the PIU, supported by specialized departments such as Technical, Procurement, Financial, Administrative Affairs, Planning and Monitoring, and Sustainability and Environmental Management. These teams collectively ensure effective project implementation, compliance, and alignment with strategic objectives.

SWOT Analysis Summary for PIU: An overview of the PIU's SWOT Analysis, outlined as follows:

- **Strengths (Solid Organizational Framework)** The PIU's structured framework, experienced workforce, and compliance with global standards like the World Bank and UNOPS enable efficient management of high-impact projects, rebuilding donor trust, and ensuring infrastructure development.

- **Weaknesses (Areas for Capacity Enhancement)** The PIU could strengthen internal audits, risk management, and transition to a blend of permanent and project-based staff for long-term knowledge retention. Enhanced documentation and reporting systems would improve transparency and accountability.

- **Opportunities (Leveraging Growth Potential)** The PIU can capitalize on Yemen's renewable energy focus and international donor collaboration to secure funding and technical support for innovative projects. Institutionalizing training and evaluations will further align operations with global standards.

- **Threats (External Risks and Constraints)** The PIU encounters challenges such as funding shortages, delays in donor approvals for project commencement, and setbacks in reactivating loans for stalled initiatives. These factors can hinder progress and disrupt the timely implementation of critical energy projects.

PIU Scope of Work: The PIU operates across several critical functions to ensure effective project management, including:

-Project Management: Supervising all phases of project execution, from initial planning and design to implementation, monitoring, and reporting.

-Procurement and Contract Management: Ensuring compliance with international procurement standards, managing tenders, and overseeing contractors to ensure quality and timeliness.

-Financial Oversight: Managing project funds: maintaining transparency in financial transactions and ensuring compliance with donor requirements.

-Monitoring and Evaluation (M&E): Implementing robust M&E frameworks to assess project outcomes and performance.

-Stakeholder Coordination: Facilitating collaboration with international donors, government entities, and local stakeholders.

-Grievance Redress Mechanism: Ensuring a mechanism is in place to address complaints and concerns from affected communities and stakeholders.

Achieving our Goals

The Project Implementation Unit (PIU), under the Ministry of Electricity and Energy, has demonstrated remarkable success in its mission of managing internationally funded projects aimed at improving Yemen's energy infrastructure. To contextualize its achievements, this summary will align job descriptions and departmental strengths with the needed objectives.

Brief Overview Aligned to Objectives

1. Optimize Project Delivery: The PIU effectively oversees logistics, procurement, and supply chain activities to ensure timely and cost-effective delivery.

2. Logistics and Procurement Manager, ensure compliance with donor guidelines and streamline operations across the unit.

3. Ensure Compliance: Departments like Finance and Administration implement robust internal controls, ensuring that budgeting, reporting, and procurement practices meet global standards. Financial professionals oversee detailed budget preparation and ensure fund allocation transparency.

4. Strengthen Institutional Capacity: Through capacity-building efforts, PIU staff are trained in cutting-edge methodologies for planning, monitoring, and evaluation. The Planning and Monitoring Manager exemplifies this by establishing frameworks to track project outcomes effectively and foster continuous improvement.

5.Expand Access to Energy: The PIU focuses on high-impact renewable energy projects, such as supervising solar power installations in underserved regions, aligning its goals with sustainable development objectives

Optimize Project Delivery

The PIU focuses on maximizing the efficient use of internationally funded resources through streamlined operations and effective project management. These efforts aim to achieve strategic energy goals while ensuring transparency, accountability, and sustainable impact.

Ensure Compliance

The PIU ensures its operations align with international standards and donor requirements by implementing robust policies, maintaining transparency, and adhering to best practices in project management and reporting.

Strengthen Institutional Capacity

The PIU is dedicated to building robust systems and processes that promote governance, enhance transparency, and optimize resource utilization, ensuring long-term institutional effectiveness and resilience.

Expand Access to Energy

The PIU aims to deliver transformative energy solutions to underserved communities by prioritizing renewable energy projects, improving access, and fostering sustainable development for long-term impact.

PIU OBJECTIVES & ACHIEVEMENTS

Expand Electricity

The PIU aims to enhance electricity availability across urban and rural areas in Yemen by implementing large-scale electrification projects. These initiatives are designed to improve living conditions, support economic activities, and ensure energy access for underserved communities.

Strengthen Infrastructure Reliability

A key objective is to maintain and upgrade existing energy infrastructure to ensure consistent and reliable electricity supply. This includes the rehabilitation of critical facilities like gas power stations and the expansion of transmission and distribution network.

Promote Renewable Energy Solutions

The PIU is dedicated to integrating renewable energy sources, such as solar power, into Yemen's energy mix. By installing solar systems in health and education centers and supporting renewable energy projects, the PIU seeks to reduce dependence on fossil fuels and promote environmental sustainability.

Enhance Rural Development Initiatives

Rural electrification remains a priority, with targeted projects to extend electricity to remote areas. These efforts are aimed at fostering economic growth, improving public services, and bridging the urban-rural energy gap.

Foster Capacity Building and Institutional Growth

Strengthening the PIU's institutional capacity through training and development programs is essential for ensuring effective project implementation. The focus includes enhancing staff expertise, improving operational protocols, and adopting best practices in project management and donor coordination.

NO. OF BENEFICIARIES

+4.7M

Renewable Energy Projects Growth

+20%

Projects Managed

$153.8M

The PIU relies on providing the necessary international funding to implement the most needed projects in accordance with the Ministry's work strategy.

THE PIU

HISTORY

2007'S

- Ministerial Decision No. 90 of 2007 regarding the adoption of a system for establishing project units to ensure the effective implementation of donor-funded projects.
- Ministerial Decision No. 143 of 2008 concerning the tasks of monitoring and evaluating projects funded by external loans.
- Cabinet Decision No. 81 of 2009 on the implementation procedures for externally funded projects.
- Ministerial Decision No. 33 of 2009 regarding the inclusion of the Al-Arish/Al-Hiswa project and the eastern segment project: Al-Habilayn/Al-Dhale'/Al-Bayda into the Project Management Unit for Transmission Lines and Substations in Marib: the main segment Dhamar/Ibb/Taiz/Aden.

2013'S

Ministerial Decision No. 47 of 2013 regarding the estructuring of externally and mixed-funded project units.

2019'S

Cabinet Decision No. 8 of 2019 concerning the implementation level of externally funded projects.

2023'S

Ministerial Decision No. 57 of 2023 to activate the PIU for externally funded projects, established by Ministerial Decision No. 47 of 2013.

2024 KEY ACHIEVEMENTS

- Completion of 87% rural electrification coverage, improving energy access for underserved regions.
- Installation of 16 MW solar power plants in Lahj, enhancing renewable energy adoption.
- Completion of the Master Plan for Aden Governorate.
- Advanced the PPA Agreement Framework, promoting investments in private sector.
- Initiated the Marib Gas Power Station restoration project, with a designed capacity of 400 MW, critical to stabilizing Yemen's energy grid.
- Launched the groundwork for Yemen's first Solar Energy Laboratory.
- Enhanced policy frameworks, including financial oversight and procurement systems, aligning with international standards.

PARTNERS AND INTERNATIONAL AFFAIRS

List of Local Partners

The Project Implementation Unit (PIU) has faced significant challenges since its establishment, particularly in 2015, due to the political and economic instability in Yemen. Despite these challenges, the PIU has worked tirelessly to sustain projects and achieve energy-related goals, including reopening channels of cooperation with international partners and exchanging updated information for effective project management.

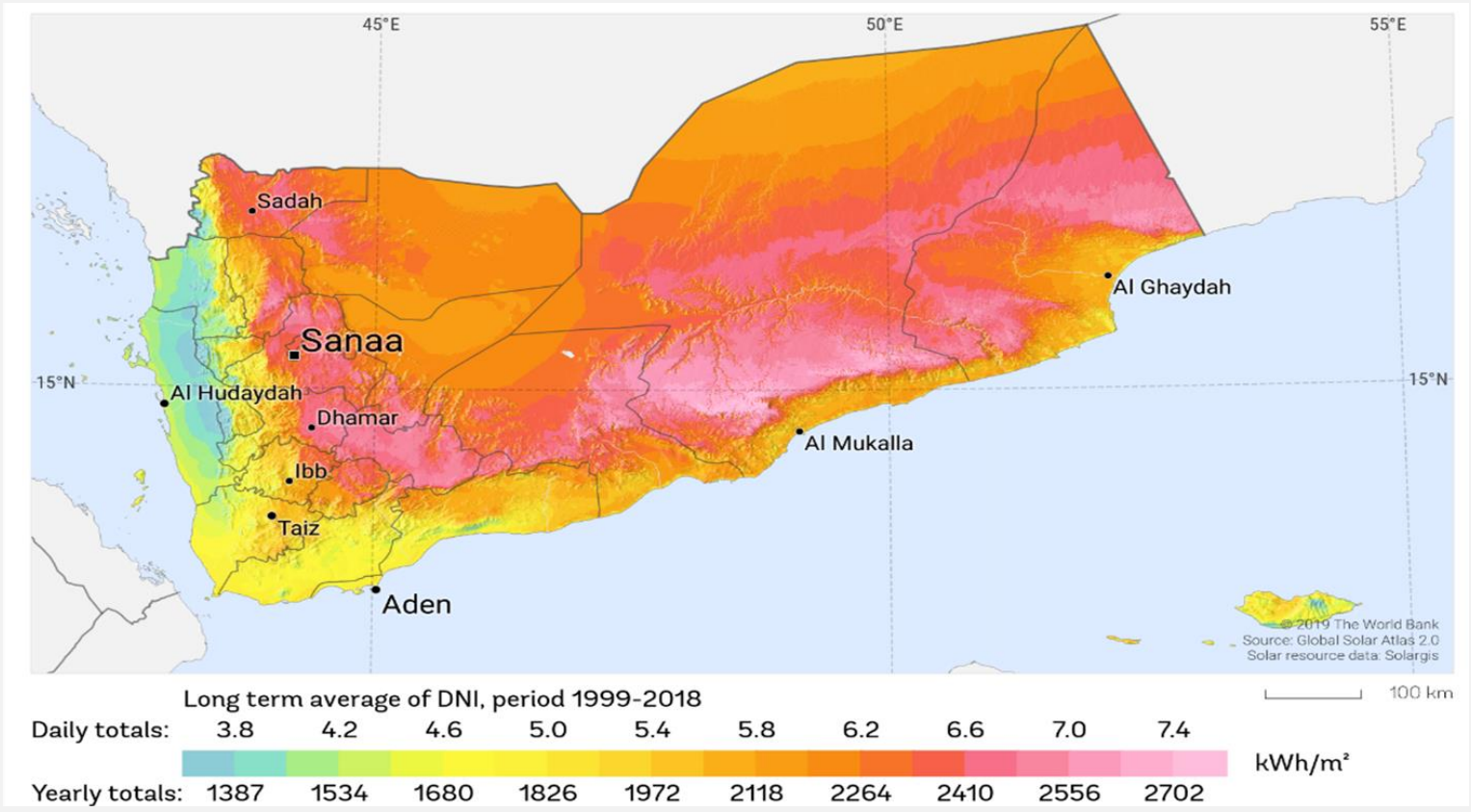
- Ministry of Electricity and Energy
- Ministry of Planning and International Cooperation
- Ministry of Finance
- Ministry of Exterior
- Ministry of Water and Environment

International Partners

"PIU plays a vital role in fostering local and international partnerships to achieve sustainable energy solutions. These partnerships are instrumental in advancing Yemen's energy goals and aligning them with SDG 7, which focuses on affordable, reliable, and sustainable energy for all."

The PIU is committed to supporting the SDGs, particularly Goal 7, by: Ensuring access to reliable energy, Increasing the use of renewable energy sources and collaborating on international and regional levels to promote energy sustainability.

STRATEGIC RENEWABLE ENERGY SECTOR 2030.



Yemen is at a pivotal moment in its transition to renewable energy, as demonstrated by the successful implementation of the 120 MW solar power project in Aden, the first and largest of its kind in the country. This project highlighted the potential of solar energy as a reliable and sustainable alternative to address the nation's chronic power outages and reduce emissions from traditional power plants.

Since 2014, Yemen's electricity sector has faced rising energy demand, doubling in some regions due to demographic shifts, war-damaged infrastructure, and outdated facilities, with limited progress in strategic generation and transmission projects. Yemen's renewable energy strategy aims to achieve 3,000 MW capacity by 2030, focusing on solar and wind energy, modernizing infrastructure, attracting investments, and building local expertise to ensure sustainable energy independence and economic development. Key challenges include funding gaps and outdated infrastructure.

Yemen's renewable energy strategy aims to achieve 3,000 MW capacity by 2030, focusing on solar and wind energy, modernizing infrastructure, attracting investments, and building local expertise to ensure sustainable energy independence and economic development. Key challenges include funding gaps and outdated infrastructure.
Yemen's renewable energy plan targets over 700 MW of utility-scale solar power across six governorates, including Aden, Lahj, and Hadhramaut, Marib, Taiz, Al Mahra and implements 80 MW of solar micro and mini-grids in rural areas like Abyan and Shabwa.

To further strengthen the adoption of solar energy, the Ministry recognizes the need for a specialized laboratory to certify and ensure the quality of imported equipment. The proposed facility will safeguard the country's energy future by promoting high standards, sustainability, efficiency, and trust in solar energy solutions.

Internationally Funded Projects
Ministry of Electricity and Energy

Al-Mansoura,
Kabuta Area

+ 967 735060803
+ 967 773691525

Info@exuifp-ye.org
Dcmpa.ye@gmail.com

Thank You

www.exuifp-ye.org