

RENEWABLE ENERGY IN THE MIDDLE EAST

\$96.5B+

Combined renewable energy investment by 2030

154 GW

Total planned renewable capacity by 2030

42–50%

Average renewable energy target by 2030

**A STRATEGIC ANALYSIS OF RENEWABLE
ENERGY INITIATIVES, INVESTMENTS, AND
ALIGNMENT WITH 2030 VISIONS IN KSA, UAE,
AND EGYPT**

Country-Specific Renewable Energy Targets

Saudi Arabia



50% renewable energy by 2030



58.7 GW from solar



130 GW total capacity



40 GW from wind

UAE



30% clean energy in mix by 2030



8,000 MW solar goal by 2030



14 GW renewable capacity



50,000 new green jobs

Egypt



42% renewable energy by 2030



10 GW new capacity target



60% renewable energy by 2040



\$10B investment planned



Major Renewable Energy Projects and Investments



Saudi Arabia

Investment Pipeline: **\$32B**

Shuaibah Two Solar Facility



⬇️ 2,060 MW
🏠 Powers 350,000 homes



UAE

Investment Plan: **\$54.5B**

Mohammed bin Rashid Solar Park



⬇️ 5,000 MW
💰 \$13.6B investment



Egypt

Investment Target: **\$10B**

Obelisk Solar Project



⬇️ 1 GW + 200MWh storage
💰 \$590M total cost

NEOM Green Hydrogen Project



⬇️ 4 GW renewable capacity
💰 \$5B investment

Al-Ajban Solar Park



⬇️ 1,500 MW
🏠 Powers 160,000 homes

Gulf of Suez Wind Project



⬇️ 1,100 MW
🏠 Powers 1,080,000 homes





Alignment with 2030 Visions and Future Outlook

👁️ Saudi Vision 2030

- ✓ **Economic diversification** from oil dependence
- ✓ Creating **50,000+ jobs** in renewable sector
- ✓ Positioning as **global energy exporter**
- ✓ Technology **localization** and export

👁️ UAE Energy Strategy 2050

- ✓ **Net-zero by 2050** emissions target
- ✓ Creating **50,000 green jobs** by 2030
- ✓ Financial savings of **AED 100 billion**
- ✓ Regional **energy leadership** position

👁️ Egypt Vision 2030

- ✓ **Energy security** and independence
- ✓ Attracting **private investment** with incentives
- ✓ Developing **green hydrogen** export potential
- ✓ Creating **4,000+ jobs** in construction



Future Outlook & Key Challenges

📈 Middle East renewable market to grow from \$52.7B to \$104.2B by 2032

🌍 Region could get 26% of primary energy from renewables by 2050

⚡ Grid integration and storage infrastructure development needed

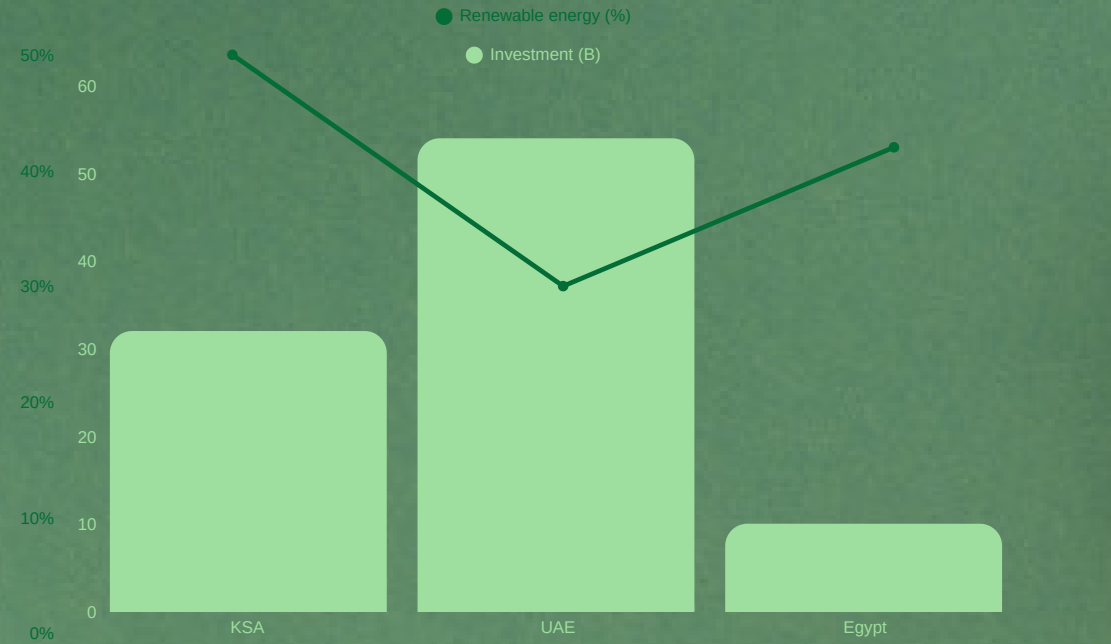


Skilled workforce development and technology transfer critical



Comparative Analysis of Renewable Energy Efforts

Renewable Energy Targets & Investments



Key Metrics Comparison

Metric	Saudi Arabia	UAE	Egypt
Renewable Target	50% by 2030	30% by 2030	42% by 2030
Capacity Goal	130 GW	14 GW	10 GW
Investment	\$32B	\$54.5B	\$10B
Jobs Created	50,000+	50,000	4,000+

Strategic Insights

📈 **KSA** leads in capacity targets (130 GW) and aims for highest renewable share (50%)

💰 **UAE** invests most per GW of capacity (\$3.9B/GW) with focus on high-value projects

⚡ **Egypt** emphasizes energy security and green hydrogen export potential

All three countries align renewable energy with broader economic diversification goals

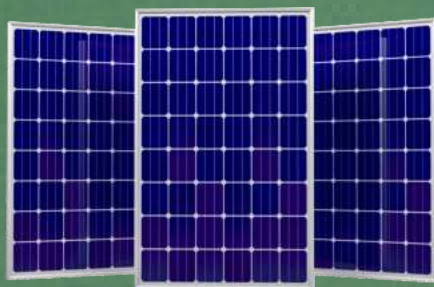
Technology Innovations in Renewable Energy

Advanced Solar Technologies

 **Concentrated Solar Power (CSP)** with thermal storage for 24/7 power generation

 **Bifacial solar panels** increasing efficiency by 15–20%

 **Floating solar installations** on reservoirs



Green Hydrogen Developments

 **Electrolyzer technology** advancements reducing production costs

 **Integration** with renewable energy sources

 **Regional hydrogen hubs** and export infrastructure

Smart Grid Solutions

 **AI-powered** energy management systems

 **Microgrids** for remote communities

 **Advanced energy storage** technologies



Policy Frameworks and Incentives

Financial Incentives

-  **Feed-in tariffs** and competitive procurement processes
-  **Tax exemptions** and reduced customs duties
-  **Green bonds** and sustainable financing

Regulatory Reforms

-  **Streamlined permitting** processes
-  **Net metering** policies
-  **Renewable portfolio** standards

International Cooperation

-  **Cross-border renewable** energy projects
-  **Technology transfer** agreements
-  **Regional power grid** integration

Public-Private Partnerships

-  **IPP models** for renewable projects
-  **Joint ventures** with international developers
-  **Local content requirements** to build domestic capabilities

Top Trending Renewable Energy Projects

Public-Private Partnerships in the Middle East



Saudi Arabia



NEOM Green Hydrogen Plant



\$5B investment



4 GW renewable capacity



600 tons green hydrogen daily

Partners: **NEOM ACWA Power Air Products**



Sudair Solar Plant



1,500 MW capacity



Powers **hundreds of thousands** of homes

Structure: **Innovative PPP financing**



UAE



Mohammed bin Rashid Solar Park



5,000 MW by 2030



D 50B total investment



Reduces **6.5M tons** CO₂ annually

Phase 1: **DEWA** 13 MW operational since 2013

Phase 2: **DEWA ACWA Power TSK**

Phase 3: **DEWA Masdar**

Phase 4: **DEWA (51%) ACWA Power (25%)**

Silk Road Fund (24%)



Egypt



Scatec Wind Partnership



5 GW wind power projects



\$5B investment



Gulf of Suez and West Sohag

Partners: **NREA Scatec**



Sungrow Solar Partnership



3 GW integrated solar project



\$2B investment



Energy storage + green hydrogen

Partners: **Egyptian Government Sungrow**

Additional Renewable Energy Projects

Public-Private Collaborations in the Middle East



Saudi Arabia



Dawadmi Wind IPP Plant



1,500 MW capacity



World record for lowest wind power cost

Partners: **Nesma Renewable Energy**
EtihadWE **KEPCO**



UAE



Hatta Hydroelectric Power Plant



Located in Hatta, Sharjah



First hydroelectric plant in UAE

Structure: **Public-Private Partnership**



Egypt



EMIYA Station



1,000 MW capacity



Located in Southeast Benban

Structure: **Public-Private Partnership**



Samtah Solar PV IPP Plant



600 MW capacity

Partners: **EDF POWER SOLUTIONS**
Saudi Electricity Company



Al Ajban Solar Project



1.5 GW capacity



Located in Abu Dhabi

Structure: **Public-Private Partnership**



Masdar Station



900 MW capacity



Located in El-Wahat

Partners: **Egyptian Government**
Masdar



Al Khazna Solar Project



1.5 GW capacity



Located in Abu Dhabi

Structure: **Public-Private Partnership**

