

POWER GENERATION IN SAUDI ARABIA

Renewable energy

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INTRODUCTION

SAUDI ARABIA'S ENERGY SECTOR IS A CORNERSTONE OF ITS ECONOMY, PROVIDING POWER TO INDUSTRIES, BUSINESSES, AND HOUSEHOLDS ACROSS THE KINGDOM. WITH A VAST RESERVE OF OIL AND NATURAL GAS, THE COUNTRY HAS HISTORICALLY RELIED ON FOSSIL FUELS TO GENERATE ELECTRICITY. HOWEVER, AS GLOBAL ENERGY TRENDS SHIFT TOWARDS SUSTAINABILITY, SAUDI ARABIA HAS EMBARKED ON A TRANSFORMATIVE JOURNEY TO DIVERSIFY ITS ENERGY MIX.

THE KINGDOM'S ENERGY STRATEGY IS DRIVEN BY VISION 2030, A NATIONAL INITIATIVE AIMED AT REDUCING DEPENDENCE ON OIL, INCREASING ENERGY EFFICIENCY, AND EXPANDING THE USE OF RENEWABLE ENERGY. THIS VISION ALIGNS WITH INTERNATIONAL EFFORTS TO COMBAT CLIMATE CHANGE AND PROMOTE SUSTAINABLE ENERGY SOLUTIONS.

THIS REPORT EXPLORES THE CURRENT STATE OF ENERGY GENERATION IN SAUDI ARABIA, DETAILING THE PRIMARY SOURCES OF ELECTRICITY PRODUCTION, THE GOVERNMENT'S RENEWABLE ENERGY INITIATIVES, AND THE CHALLENGES AND OPPORTUNITIES THAT LIE AHEAD. THE FINDINGS PRESENTED HERE ARE BASED ON DATA FROM THE GENERAL AUTHORITY FOR STATISTICS (GASTAT) AND OTHER REPUTABLE SOURCES, ENSURING AN ACCURATE AND COMPREHENSIVE ANALYSIS OF THE COUNTRY'S ENERGY LANDSCAPE.

SAUDI ARABIA HAS ONE OF THE LARGEST AND MOST ADVANCED ENERGY SECTORS IN THE WORLD, PRIMARILY DRIVEN BY ITS VAST RESERVES OF OIL AND NATURAL GAS. THE KINGDOM'S ENERGY INFRASTRUCTURE IS DESIGNED TO SUPPORT A RAPIDLY GROWING POPULATION, INDUSTRIAL EXPANSION, AND INCREASING ENERGY DEMANDS.

1. HISTORICAL BACKGROUND

FOR DECADES, SAUDI ARABIA HAS RELIED ON FOSSIL FUELS AS THE PRIMARY SOURCE OF ENERGY. THE DISCOVERY OF OIL IN THE 1930S MARKED THE BEGINNING OF THE COUNTRY'S DOMINANCE IN GLOBAL ENERGY MARKETS. SINCE THEN, THE GOVERNMENT HAS HEAVILY INVESTED IN ENERGY PRODUCTION, REFINING, AND DISTRIBUTION, ENSURING A STABLE SUPPLY OF ELECTRICITY NATIONWIDE



2. CURRENT ENERGY PRODUCTION CAPACITY

ACCORDING TO DATA FROM THE GENERAL AUTHORITY FOR STATISTICS
(GASTAT) AND THE SAUDI ELECTRICITY COMPANY (SEC)

THE KINGDOM PRODUCES OVER 400 TERAWATT-HOURS (TWH) OF
.ELECTRICITY ANNUALLY

MORE THAN 99% OF THE POPULATION HAS ACCESS TO ELECTRICITY,
MAKING SAUDI ARABIA ONE OF THE MOST ELECTRIFIED NATIONS IN
.THE WORLD

OIL AND NATURAL GAS ACCOUNT FOR NEARLY 99% OF ELECTRICITY
GENERATION, WITH RENEWABLE ENERGY SOURCES GRADUALLY
.INCREASING THEIR CONTRIBUTION

3. ROLE OF THE ENERGY SECTOR IN THE ECONOMY

THE ENERGY SECTOR IS A MAJOR DRIVER OF SAUDI ARABIA'S
ECONOMY, CONTRIBUTING SIGNIFICANTLY TO GDP GROWTH, JOB
CREATION, AND INDUSTRIAL DEVELOPMENT. KEY INDUSTRIES SUCH AS
PETROCHEMICALS, MANUFACTURING, AND DESALINATION PLANTS
.HEAVILY RELY ON STABLE AND AFFORDABLE ELECTRICITY

AS THE KINGDOM MOVES TOWARDS A MORE SUSTAINABLE FUTURE, THE
GOVERNMENT IS ACTIVELY WORKING ON REDUCING DEPENDENCE ON
OIL-BASED POWER GENERATION AND INCREASING INVESTMENTS IN
SOLAR, WIND, AND NUCLEAR ENERGY PROJECTS. THESE EFFORTS
ALIGN WITH SAUDI ARABIA'S COMMITMENT TO DIVERSIFYING ITS
.ECONOMY AND ENSURING LONG-TERM ENERGY SECURITY

SAUDI ARABIA'S ELECTRICITY GENERATION IS PREDOMINANTLY BASED ON FOSSIL FUELS, BUT SIGNIFICANT EFFORTS ARE UNDERWAY TO DIVERSIFY THE ENERGY MIX. THE KINGDOM HAS ABUNDANT RESOURCES FOR BOTH TRADITIONAL AND RENEWABLE ENERGY, POSITIONING IT AS A GLOBAL LEADER IN ENERGY PRODUCTION.

1. FOSSIL FUELS: THE DOMINANT ENERGY SOURCE.

A. OIL-BASED POWER GENERATION

HISTORICALLY, SAUDI ARABIA HAS RELIED HEAVILY ON CRUDE OIL AND REFINED PETROLEUM PRODUCTS FOR ELECTRICITY GENERATION

ALTHOUGH OIL-FIRED POWER PLANTS REMAIN A KEY COMPONENT OF THE ENERGY MIX, THE GOVERNMENT AIMS TO REDUCE OIL CONSUMPTION IN POWER GENERATION TO FREE UP MORE CRUDE OIL FOR EXPORT

B. NATURAL GAS: THE TRANSITION FUEL

IN RECENT YEARS, SAUDI ARABIA HAS SHIFTED TOWARDS NATURAL GAS AS A CLEANER AND MORE EFFICIENT ALTERNATIVE TO OIL

NATURAL GAS NOW ACCOUNTS FOR OVER 60% OF THE COUNTRY'S ELECTRICITY PRODUCTION, REDUCING CARBON EMISSIONS AND IMPROVING ENERGY EFFICIENCY

THE KINGDOM IS EXPANDING ITS GAS INFRASTRUCTURE, INCLUDING THE JAFURAH GAS FIELD, ONE OF THE LARGEST SHALE GAS RESERVES IN THE WORLD

2. RENEWABLE ENERGY: THE FUTURE OF SAUDI POWER

AS PART OF VISION 2030, SAUDI ARABIA IS INVESTING HEAVILY IN RENEWABLE ENERGY SOURCES, AIMING TO GENERATE 50% OF ITS ELECTRICITY FROM RENEWABLES BY 2030

A. SOLAR ENERGY: SAUDI ARABIA'S GREATEST POTENTIAL

WITH SOME OF THE WORLD'S HIGHEST SOLAR RADIATION LEVELS, SAUDI ARABIA HAS IMMENSE POTENTIAL FOR SOLAR POWER GENERATION

KEY PROJECTS INCLUDE

SAKAKA SOLAR PLANT – THE FIRST UTILITY-SCALE SOLAR PROJECT IN THE KINGDOM, GENERATING 300 MW

MOHAMMED BIN SALMAN SOLAR PARK – A MEGA SOLAR PROJECT UNDER DEVELOPMENT

THE SAUDI GREEN INITIATIVE AIMS TO EXPAND SOLAR POWER CAPACITY SIGNIFICANTLY IN THE COMING YEARS



CHALLENGES AND OPPORTUNITIES

AS SAUDI ARABIA TRANSITIONS TOWARDS A MORE SUSTAINABLE ENERGY MIX, SEVERAL CHALLENGES AND OPPORTUNITIES ARISE:

CHALLENGES

HIGH INITIAL INVESTMENT COSTS – BUILDING SOLAR, WIND, AND NUCLEAR INFRASTRUCTURE REQUIRES SIGNIFICANT FUNDING

ENERGY STORAGE AND GRID INTEGRATION – RENEWABLE ENERGY SOURCES REQUIRE ADVANCED STORAGE SOLUTIONS TO MAINTAIN GRID STABILITY

CLIMATE AND ENVIRONMENTAL CONCERN – WHILE RENEWABLES REDUCE CARBON EMISSIONS, FOSSIL FUEL PLANTS STILL CONTRIBUTE TO AIR POLLUTION

TECHNOLOGICAL DEVELOPMENT – SAUDI ARABIA IS INVESTING IN R&D TO IMPROVE LOCAL EXPERTISE IN CLEAN ENERGY SOLUTIONS

OPPORTUNITIES

GLOBAL LEADERSHIP IN RENEWABLE ENERGY – WITH ITS VAST SOLAR AND WIND RESOURCES, SAUDI ARABIA CAN BECOME A MAJOR EXPORTER OF CLEAN ENERGY

JOB CREATION AND ECONOMIC GROWTH – EXPANDING THE RENEWABLE ENERGY SECTOR WILL CREATE THOUSANDS OF JOBS AND BOOST THE LOCAL ECONOMY

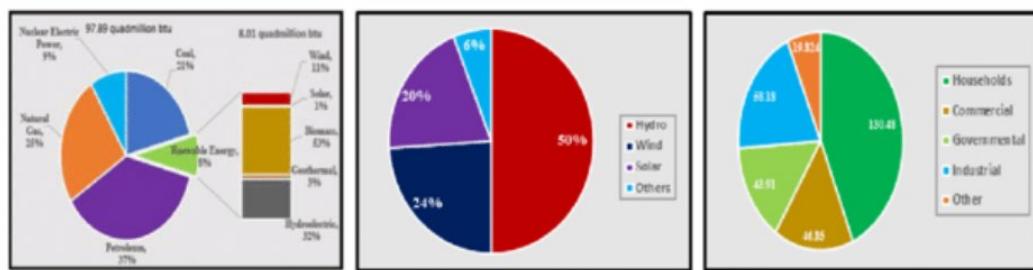
HYDROGEN PRODUCTION – THE KINGDOM IS INVESTING IN GREEN HYDROGEN, A PROMISING FUTURE ENERGY SOURCE

ENERGY EFFICIENCY PROGRAMS – GOVERNMENT INITIATIVES ENCOURAGE ENERGY CONSERVATION AND SMART GRID TECHNOLOGIES

SAUDI ARABIA'S COMMITMENT TO RENEWABLE ENERGY, INNOVATION, AND SUSTAINABILITY POSITION IT AS A LEADER IN THE GLOBAL ENERGY TRANSITION, ENSURING A MORE SECURE AND ECO-FRIENDLY FUTURE

FUTURE RENEWABLE ENERGY APPLICATIONS IN SAUDI ARABIA

AS SAUDI ARABIA CONTINUES ITS TRANSITION TOWARDS A SUSTAINABLE ENERGY FUTURE, EXPLORING NEW RENEWABLE ENERGY SOURCES AND TECHNOLOGIES IS CRUCIAL. IN ADDITION TO EXISTING SOLAR AND WIND ENERGY PROJECTS, THE KINGDOM HAS THE POTENTIAL TO EXPAND INTO NUCLEAR ENERGY, SOLAR THERMAL POWER, AND GEOTHERMAL ENERGY. THESE ADVANCED SOLUTIONS CAN FURTHER ENHANCE ENERGY SECURITY, REDUCE RELIANCE ON FOSSIL FUELS, AND SUPPORT VISION 2030 GOALS.



(a)

(b)

(c)

1. NUCLEAR ENERGY: A SUSTAINABLE AND STABLE POWER SOURCE

THE ROLE OF NUCLEAR POWER IN SAUDI ARABIA'S FUTURE

NUCLEAR ENERGY IS A HIGHLY EFFICIENT AND RELIABLE SOURCE OF POWER THAT CAN PROVIDE STABLE ELECTRICITY PRODUCTION WITHOUT CARBON EMISSIONS. SAUDI ARABIA HAS ALREADY TAKEN STEPS TOWARDS DEVELOPING ITS NUCLEAR ENERGY SECTOR, WITH PLANS TO CONSTRUCT LARGE-SCALE NUCLEAR REACTORS.

ADVANTAGES OF NUCLEAR ENERGY FOR SAUDI ARABIA

RELIABLE AND STABLE ELECTRICITY SUPPLY - UNLIKE SOLAR AND WIND POWER, NUCLEAR ENERGY IS NOT AFFECTED BY WEATHER CONDITIONS, ENSURING CONSISTENT ENERGY OUTPUT

LOW CARBON EMISSIONS - NUCLEAR POWER SIGNIFICANTLY REDUCES GREENHOUSE GAS EMISSIONS, SUPPORTING THE KINGDOM'S ENVIRONMENTAL GOALS

ENERGY INDEPENDENCE - BY DEVELOPING A NUCLEAR ENERGY SECTOR, SAUDI ARABIA CAN REDUCE DEPENDENCE ON FOSSIL FUELS FOR DOMESTIC ELECTRICITY GENERATION

CURRENT AND FUTURE NUCLEAR ENERGY PROJECTS

SAUDI NATIONAL ATOMIC ENERGY PROJECT (SNAEP) - THIS INITIATIVE IS DEVELOPING NUCLEAR ENERGY INFRASTRUCTURE AND EXPLORING POTENTIAL SITES FOR NUCLEAR REACTORS

SMALL MODULAR REACTORS (SMRS) - SAUDI ARABIA IS RESEARCHING ADVANCED NUCLEAR TECHNOLOGIES, SUCH AS SMRS, WHICH OFFER FLEXIBLE AND SAFER ALTERNATIVES TO TRADITIONAL NUCLEAR POWER PLANTS

URANIUM MINING AND FUEL PRODUCTION - THE KINGDOM IS ALSO INVESTING IN URANIUM EXTRACTION AND FUEL PROCESSING, AIMING TO DEVELOP A LOCAL NUCLEAR FUEL CYCLE

CHALLENGES AND CONSIDERATIONS

HIGH INITIAL COSTS - BUILDING AND MAINTAINING NUCLEAR REACTORS REQUIRES
.SIGNIFICANT INVESTMENT

SAFETY AND WASTE MANAGEMENT - PROPER HANDLING OF NUCLEAR WASTE AND
ENSURING SAFETY PROTOCOLS ARE ESSENTIAL FOR PUBLIC AND ENVIRONMENTAL
.PROTECTION

INTERNATIONAL REGULATIONS - SAUDI ARABIA IS WORKING WITH GLOBAL NUCLEAR
AGENCIES TO ENSURE COMPLIANCE WITH INTERNATIONAL NUCLEAR SAFETY
.STANDARDS

WITH STRONG GOVERNMENTAL SUPPORT AND STRATEGIC INVESTMENTS, NUCLEAR
ENERGY CAN PLAY A VITAL ROLE IN SAUDI ARABIA'S LONG-TERM ENERGY
.DIVERSIFICATION PLANS



2. SOLAR THERMAL ENERGY: A HIGH-EFFICIENCY SOLAR SOLUTION

?WHAT IS SOLAR THERMAL ENERGY

UNLIKE TRADITIONAL PHOTOVOLTAIC (PV) SOLAR PANELS, SOLAR THERMAL ENERGY USES MIRRORS OR LENSES TO CONCENTRATE SUNLIGHT AND GENERATE HEAT, WHICH IS THEN CONVERTED INTO ELECTRICITY. THIS METHOD, KNOWN AS CONCENTRATED SOLAR POWER (CSP), IS PARTICULARLY EFFECTIVE IN REGIONS WITH HIGH SOLAR RADIATION, MAKING SAUDI ARABIA AN IDEAL LOCATION FOR .LARGE-SCALE DEPLOYMENT

ADVANTAGES OF SOLAR THERMAL ENERGY FOR SAUDI ARABIA

ENERGY STORAGE CAPABILITIES – SOLAR THERMAL PLANTS CAN STORE HEAT IN .MOLTEN SALTS, ALLOWING ELECTRICITY PRODUCTION EVEN AFTER SUNSET

HIGHER EFFICIENCY IN LARGE-SCALE POWER GENERATION – CSP PLANTS ARE MORE EFFICIENT THAN PV PANELS FOR SUPPLYING ELECTRICITY TO INDUSTRIAL .FACILITIES AND CITIES

REDUCED RELIANCE ON FOSSIL FUELS – BY REPLACING OIL-BASED POWER PLANTS, .SOLAR THERMAL TECHNOLOGY CAN SIGNIFICANTLY CUT FUEL CONSUMPTION

POTENTIAL CSP PROJECTS IN SAUDI ARABIA

NEOM SOLAR DOME – A GROUNDBREAKING PROJECT EXPLORING ADVANCED SOLAR .DESALINATION USING CSP TECHNOLOGY

HYBRID CSP AND NATURAL GAS PLANTS – INTEGRATING CSP WITH NATURAL GAS .POWER PLANTS CAN ENHANCE GRID STABILITY AND ENERGY EFFICIENCY

SOLAR THERMAL FOR INDUSTRIAL APPLICATIONS – SAUDI ARABIA CAN UTILIZE SOLAR HEAT FOR PETROCHEMICAL PRODUCTION, DESALINATION PLANTS, AND .WATER HEATING SYSTEMS

CHALLENGES AND CONSIDERATIONS

.HIGH LAND USAGE - LARGE-SCALE CSP PLANTS REQUIRE EXTENSIVE LAND AREAS

INITIAL INVESTMENT COSTS - WHILE OPERATIONAL COSTS ARE LOW, BUILDING CSP

.INFRASTRUCTURE REQUIRES SIGNIFICANT UPFRONT INVESTMENT

TECHNOLOGICAL DEVELOPMENT - CONTINUED RESEARCH AND INNOVATION ARE NEEDED
.TO OPTIMIZE CSP SYSTEMS FOR THE SAUDI CLIMATE

WITH ITS VAST DESERTS AND HIGH SOLAR INTENSITY, SAUDI ARABIA HAS IMMENSE
.POTENTIAL TO BECOME A GLOBAL LEADER IN SOLAR THERMAL ENERGY



3. GEOTHERMAL ENERGY: UNLOCKING THE POWER BENEATH THE EARTH

?WHAT IS GEOTHERMAL ENERGY

GEOTHERMAL ENERGY HARNESSES HEAT FROM THE EARTH'S INTERIOR TO GENERATE ELECTRICITY OR PROVIDE DIRECT HEATING. UNLIKE SOLAR AND WIND ENERGY, GEOTHERMAL POWER PLANTS OPERATE 24/7, MAKING THEM A HIGHLY RELIABLE SOURCE OF RENEWABLE ENERGY

POTENTIAL FOR GEOTHERMAL ENERGY IN SAUDI ARABIA

WHILE SAUDI ARABIA IS NOT KNOWN FOR ACTIVE VOLCANOES OR GEYSERS, THE KINGDOM HAS SEVERAL GEOTHERMAL HOTSPOTS, ESPECIALLY IN THE WESTERN REGION NEAR THE RED SEA RIFT. DEEP-DRILLING TECHNOLOGIES CAN HELP TAP INTO UNDERGROUND HEAT SOURCES

ADVANTAGES OF GEOTHERMAL ENERGY FOR SAUDI ARABIA

CONTINUOUS POWER SUPPLY - UNLIKE SOLAR OR WIND ENERGY, GEOTHERMAL PLANTS PROVIDE CONSTANT AND STABLE ENERGY OUTPUT

LOW ENVIRONMENTAL IMPACT - GEOTHERMAL ENERGY HAS MINIMAL CARBON EMISSIONS AND A SMALL LAND FOOTPRINT

DESALINATION AND INDUSTRIAL APPLICATIONS - GEOTHERMAL HEAT CAN BE USED FOR SEAWATER DESALINATION, DISTRICT HEATING, AND INDUSTRIAL PROCESSES

POTENTIAL GEOTHERMAL PROJECTS IN SAUDI ARABIA

EXPLORING THE RED SEA RIFT - THE SAUDI GEOLOGICAL SURVEY IS STUDYING HOT WATER RESERVOIRS NEAR THE RED SEA COASTLINE

GEOTHERMAL-POWERED DESALINATION PLANTS - USING GEOTHERMAL HEAT FOR SEAWATER DESALINATION CAN REDUCE ENERGY COSTS AND CARBON FOOTPRINT

HYBRID GEOTHERMAL AND SOLAR SYSTEMS - COMBINING GEOTHERMAL AND SOLAR ENERGY CAN ENHANCE OVERALL EFFICIENCY AND RELIABILITY

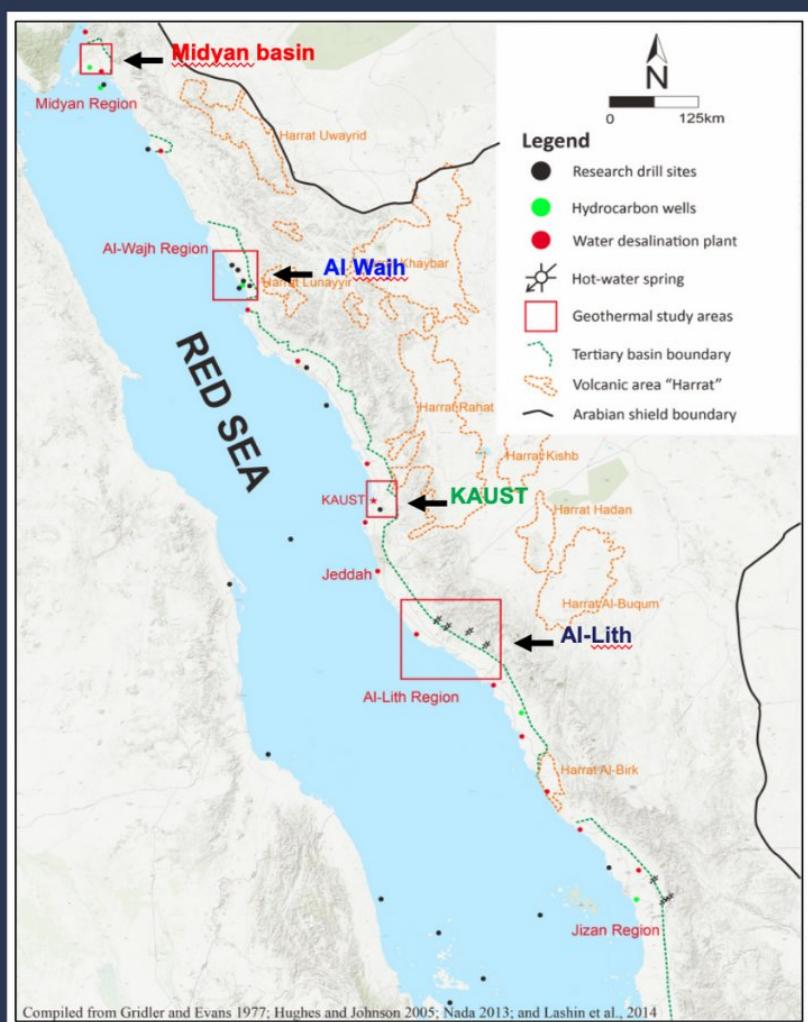
CHALLENGES AND CONSIDERATIONS

EXPLORATION COSTS - DRILLING DEEP WELLS FOR GEOTHERMAL HEAT IS EXPENSIVE
.AND REQUIRES ADVANCED TECHNOLOGY

LIMITED AWARENESS AND EXPERTISE - DEVELOPING A SKILLED WORKFORCE AND
.GEOTHERMAL INFRASTRUCTURE IS ESSENTIAL

RESOURCE UNCERTAINTY - GEOTHERMAL POTENTIAL VARIES, REQUIRING
.EXTENSIVE GEOLOGICAL SURVEYS

WITH STRATEGIC INVESTMENT AND ADVANCED DRILLING TECHNIQUES, SAUDI
ARABIA CAN UNLOCK GEOTHERMAL ENERGY AS A SUSTAINABLE POWER SOURCE FOR
.FUTURE GENERATIONS



CONCLUSION: A DIVERSIFIED RENEWABLE ENERGY FUTURE

SAUDI ARABIA IS WELL-POSITIONED TO BECOME A GLOBAL LEADER IN RENEWABLE ENERGY, WITH VAST OPPORTUNITIES IN NUCLEAR POWER, SOLAR THERMAL ENERGY, AND GEOTHERMAL ENERGY. EACH OF THESE TECHNOLOGIES OFFERS UNIQUE ADVANTAGES THAT CAN HELP THE KINGDOM ACHIEVE ITS VISION 2030 GOALS AND ENSURE ENERGY SECURITY FOR FUTURE GENERATIONS.

BY INVESTING IN RESEARCH, INFRASTRUCTURE, AND INNOVATIVE ENERGY SOLUTIONS, SAUDI ARABIA CAN TRANSITION INTO A CLEAN ENERGY POWERHOUSE, REDUCING ITS RELIANCE ON FOSSIL FUELS WHILE LEADING THE GLOBAL SHIFT TOWARD SUSTAINABILITY.



REFERENCES

1. RENEWABLE ENERGY IN SAUDI ARABIA - THIS ARTICLE PROVIDES AN OVERVIEW OF THE TYPES OF RENEWABLE ENERGY USED IN THE KINGDOM, INCLUDING SOLAR, WIND, AND HYDRO ENERGY.

2. GEOTHERMAL ENERGY IN SAUDI ARABIA: UNTAPPED POTENTIAL FOR ELECTRICITY DIVERSIFICATION - THIS SOURCE DISCUSSES THE UNTAPPED POTENTIAL OF GEOTHERMAL ENERGY IN SAUDI ARABIA AND ITS ROLE IN DIVERSIFYING ELECTRICITY PRODUCTION.

[HTTPS://WWW.KAPSARC.ORG/AR/NEWS/](https://www.kapsarc.org/ar/news/)

3. ATLAS OF RENEWABLE ENERGY RESOURCES - KING ABDULLAH CITY FOR ATOMIC AND RENEWABLE ENERGY - THIS SOURCE PROVIDES INFORMATION ON SAUDI ARABIA'S NATIONAL PROJECT TO MEASURE RENEWABLE ENERGY SOURCES, INCLUDING SOLAR, WIND, WASTE-TO-ENERGY, AND GEOTHERMAL POWER.

SAUDI ENERGY MINISTRY
[HTTPS://WWW.ENERGY.GOV.SA/AR/INIT/PAGES/ATLAAS.ASPX](https://www.energy.gov.sa/ar/init/pages/atlaas.aspx)

4. ELECTRICITY AND ENERGY IN SAUDI ARABIA - NATIONAL UNIFIED PLATFORM - THIS SOURCE OUTLINES THE KINGDOM'S EFFORTS TO DIVERSIFY ITS ENERGY MIX BY INCREASING THE SHARE OF GAS AND RENEWABLE ENERGY IN ELECTRICITY PRODUCTION.

SAUDI GOVERNMENT PORTAL
[HTTPS://WWW.MY.GOV.SA/WPS/PORTAL/SNP/ABOUTKSA/POWERANDELECTRICITY](https://www.my.gov.sa/wps/portal/snپ/aboutksa/powerandelectricity)

5. SAUDI ARABIA ANNOUNCES A 300% INCREASE IN RENEWABLE ENERGY CAPACITY - THIS ARTICLE HIGHLIGHTS THE SIGNIFICANT INCREASE IN THE SHARE OF RENEWABLE ENERGY IN THE KINGDOM'S ENERGY MIX.

SAUDI GREEN INITIATIVE
[HTTPS://WWW.SGI.GOV.SA/AR-SA/KNOWLEDGE-HUB/SAUDI-ARABIA-ANNOUNCES-300-INCREASE-IN-INSTALLED-RENEWABLES-CAPACITY-439-MILLION-TREES-PLANTED-SINCE-LAUNCH-OF-SAUDI-GREEN-INITIATIVE/](https://www.sgi.gov.sa/ar-sa/knowledge-hub/saudi-arabia-announces-300-increase-in-installed-renewables-capacity-439-million-trees-planted-since-launch-of-saudi-green-initiative/)

6. FUTURE ENERGY - KING ABDULLAH CITY FOR ATOMIC AND RENEWABLE ENERGY - THIS SOURCE DISCUSSES SAUDI ARABIA'S ENERGY MIX TARGETS FOR 2032, INCLUDING NUCLEAR ENERGY, SOLAR ENERGY, WIND ENERGY, AND GEOTHERMAL ENERGY.

SAUDI ENERGY MINISTRY
[HTTPS://WWW.ENERGY.GOV.SA/AR/FUTUREENERGY/PAGES/VISION.ASPX](https://www.energy.gov.sa/ar/futureenergy/pages/vision.aspx)

7. LIST OF RENEWABLE ENERGY PROJECTS IN SAUDI ARABIA - SAUDIPEDIA - THIS ARTICLE PROVIDES A LIST OF RENEWABLE ENERGY PROJECTS IN THE KINGDOM, SUCH AS THE DUMAT AL-JANDAL WIND PROJECT AND THE RAFHA SOLAR PHOTOVOLTAIC PROJECT.

SAUDIPEDIA
[HTTPS://SAUDIPEDIA.COM/ARTICLE/14268](https://saudipedia.com/article/14268)