

# Sustainable Energy Solutions: Innovation & Efficiency

Smart EPC Solutions for Sustainable Energy Future

**whitestone savanna**  
engineers & contractors · saudi arabia



Peter Cain (1959, 1997) inspiration, AI



# Our Expertise in Renewable Energy & EPC Contracting

## Decades of Experience

Proven success in designing, building, and operating large-scale renewable energy projects.

## Strategic Partnerships

Collaboration with top-tier global suppliers and technology providers.

## Comprehensive EPC Services

From feasibility studies to full-scale deployment and maintenance.

## Customized Solutions for KSA

Tailoring projects to align with Saudi Arabia's energy goals and regulations.



# Renewable Energy Solutions: Solar, Wind and Biomass Power

## Utility-Scale Solar Power Plants

High-efficiency PV and CSP solutions.

## Onshore Wind Farms

Advanced wind turbine technologies for maximum yield.

## Hybrid Renewable Energy Systems

Combining solar, wind, and energy storage for grid stability.

## Biomass Power Generation

Sustainable biomass solutions for reliable power.

## Microgrid & Distributed Energy Solutions

Powering industrial, commercial, and remote areas.



# Our Solutions:

## Energy Storage Solutions: Battery & Grid-Scale Systems

1

Battery Energy Storage Systems (BESS)

Lithium-ion, flow batteries, and hybrid storage.

2

Pumped Hydro Energy Storage (PHES)

Large-scale energy storage for grid balancing.

3

Thermal Energy Storage (TES)

Using heat storage to enhance solar power plants

4

Smart Grid Integration

AI-driven optimization for real-time energy demand management



# Energy Supply Solutions: Powering KSA's Future

Independent Power Producer  
(IPP) & Power Purchase  
Agreements (PPAs)

Decentralized & Off-Grid  
Energy Solutions

Reliable power for industrial zones and  
remote locations.

Green Hydrogen Production &  
Supply

Fueling KSA's clean energy economy.

Waste-to-Energy (WTE) Technologies

Converting waste into renewable electricity

# Energy Conservation & Efficiency Measures

## Smart Building Energy Management Systems (BEMS)

AI-driven energy monitoring & automation.

## Demand Response & Load Management

Reducing peak demand & improving grid resilience.

## Industrial Energy Optimization

Process electrification & efficiency upgrades.

## District Cooling & Waste Heat Recovery

Enhancing efficiency in large-scale urban projects




# Leading Technology Suppliers & Vendors in Renewable Energy & Power

Siemens **SIEMENS**

(Germany) – Advanced wind turbine & solar energy solutions.

Vestas **Vestas**

(Denmark) – Leading wind energy technology provider.

General Electric 

(USA) – Comprehensive wind, solar, and grid solutions.

Repower **REPOWER**


(Germany) – High-efficiency wind power technology.

Trina Solar **TrinaSolar**

(China) – Leading manufacturer of solar PV modules

First Solar 

(USA) – High-performance thin-film solar PV modules.

Abengoa 

(Spain) – Specialist in Concentrated Solar Power (CSP) solutions.



# Energy Storage & Smart Grids

Tesla



(USA) – Cutting-edge  
battery energy storage  
(BESS)

Fluence



(USA/Germany) – Grid-  
scale energy storage &  
optimization.

General Electric



(USA) – Smart grid & hybrid  
energy solutions.

Schneider Electric



(France) – Advanced  
energy management  
systems.





# Biomass, Biogas & Waste-to-Energy

MAN Energy  
Solutions



(Germany) – Biogas &  
biomass power generation

Hitachi Zosen Inova  
(Switzerland) – Waste-to-  
energy & resource recovery

Hitachi Zosen  
INOVA

Valmet



(Finland) – Advanced  
biomass combustion &  
power technologies

ANDRITZ



(Austria) – Sustainable  
biomass & hydro solutions.



# Hydrogen & Green Energy Innovations

Siemens **SIEMENS**

(Germany) – Green hydrogen production & electrolyzer solutions

MAN Energy Solutions

(Germany) – Hydrogen storage, liquefaction & power-to-gas technologies.

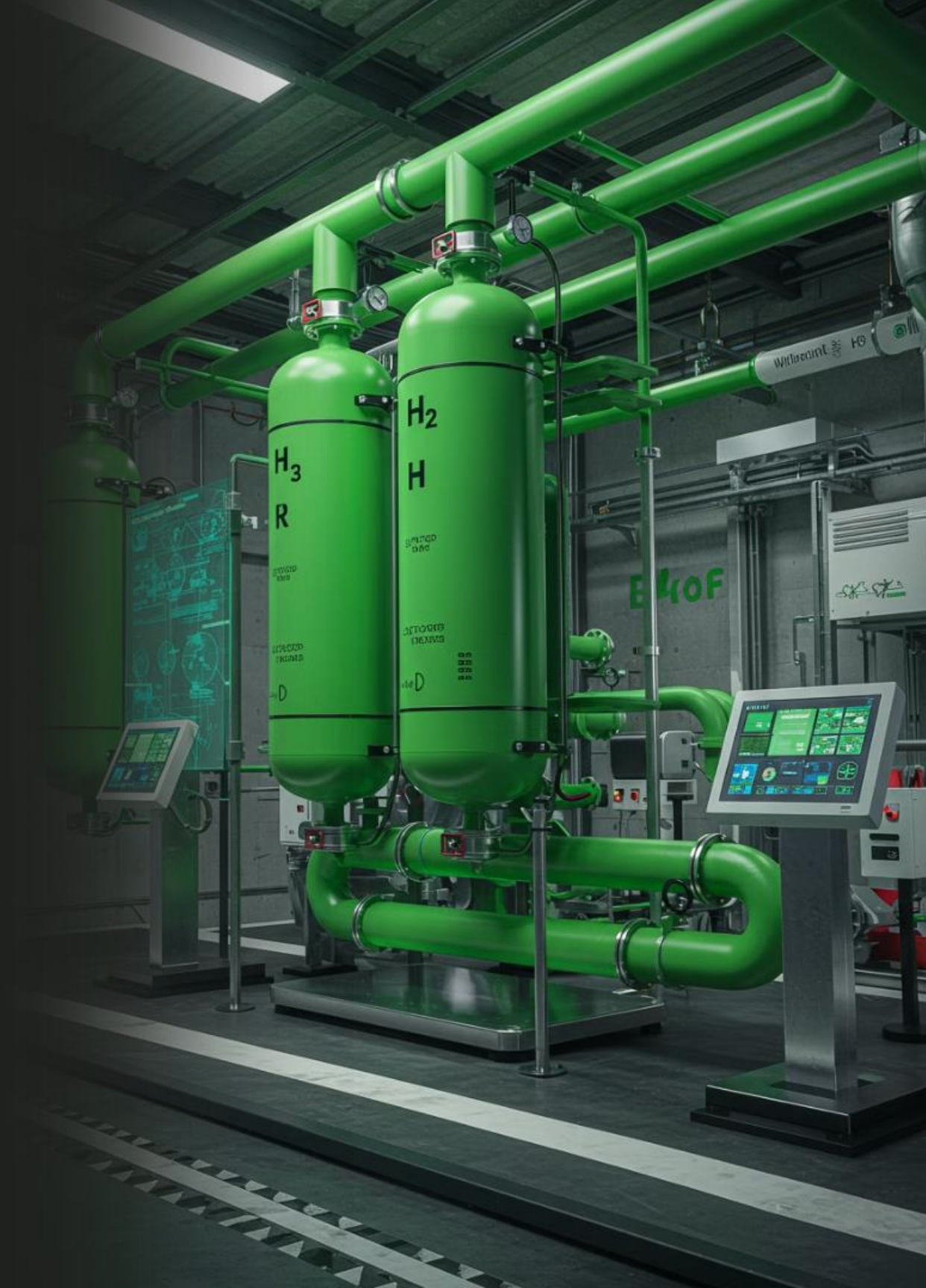


Linde *Linde*

(Germany) – Green hydrogen infrastructure & distribution

Air Liquide

(France) – Hydrogen storage & industrial applications.





# The Future of Energy in Saudi Arabia

Renewable Energy Transition & Net Zero Targets

AI & IoT for Smart Energy Management

Hydrogen & Carbon Capture Innovations

Decentralized & Resilient Energy Grids



# Case Study:

## Utility-Scale Solar & Battery Storage Project

500 MW Solar PV Plant with  
Integrated BESS

AI-Driven Energy Management  
Cuts Costs by 30%

24/7 Reliable Power Supply for Industrial Clients





# Case Study:

## Smart Energy Conservation in Industrial Zones

AI-Powered Load  
Management Reduced  
Peak Demand by 25%

Process Electrification &  
Energy Recovery Cut Costs  
by 40%

Scalable Solutions for Factories & Business Parks

# Competitive Advantages of Our Energy Solutions

## End-to-End EPC Services

From feasibility to full-scale deployment.

## Sustainability & Compliance

Aligning with Vision 2030 & global standards.

## Technology Leadership

AI, IoT, and automation-driven efficiency.

## Scalable & Tailored Solutions

Designed for utility, industrial, and commercial needs.





# Roadmap for Implementation

## Phase 1

Feasibility Study &  
Regulatory  
Approvals

## Phase 2

Design,  
Engineering &  
Procurement

## Phase 3

Construction &  
System  
Deployment

## Phase 4

Testing,  
Optimization &  
Commissioning

## Phase 5

Long-Term  
Operations &  
Smart Monitoring



# Contact & Next Steps

- 1 How to Partner with Us?
- 2 Q&A Session
- 3 Future Collaboration Opportunities
- 4 Location:  
Olaya - 182 Cima Towers, Floor 6, Riyadh, 11584, SA
- 5 Contact Data:  
[info@whitestone-savanna.com](mailto:info@whitestone-savanna.com)

