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**Stakeholders Role in
Implementation of Renewable
Energy in Pakistan**

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The Reference Framework ..1

- Renewable electricity generation capacity reached an estimated 240 gigawatts (GW) worldwide in 2007, an increase of 50 percent over 2004.
- The largest component of renewables generation capacity is wind power, which grew by 28 percent worldwide in 2007 to reach an estimated 95 GW
- The fastest growing energy technology in the world is grid-connected solar photovoltaics (PV), with 50 percent annual increases in cumulative installed capacity in both 2006 and 2007, to an estimated 7.7 GW. This translates into 1.5 million homes with rooftop solar PV feeding into the grid worldwide.

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The Reference Framework ..2

- Solar hot water/heating capacity increased by 19 percent in 2006.
- Production of biofuels (ethanol and biodiesel) exceeded an estimated 53 billion liters in 2007, up 43 percent from 2005.
- Annual biodiesel production increased by more than 50 percent in 2006.
- An estimated \$71 billion was invested in new renewable power and heating capacity worldwide in 2007


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The Reference Framework ..3

- At least 60 countries—37 developed and transition countries and 23 developing countries have some type of policy to promote renewable power generation. The most common policy is the feed-in law.

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RE Status in Pakistan

- Wind
- Bio Diesel
- Solar Hot Water
- Solar Photo Voltaic

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The Stakeholders

- **AEDB**
- **Ministry of Water & Power**
 - **WAPDA/NTDC/PEPCO**
 - **DISCO's**
 - **KESC**
- **Provincial Governments**
- **Investors**
- **Consumers**
- **NEPRA**

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Stakeholders Obligations ..1

- AEDB
 - Policy & Incentives
 - Coordination
 - Targets & Goals
 - Security Documents
 - Enabling Environment

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Stakeholders Obligations ..2

- Ministry of Water & Power
 - PPA
 - Technology Upgradation
 - System Integration
 - Capacity Building
 - Seize the Opportunity

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Stakeholders Obligations ..3

- Provincial Governments
 - Facilitate Implementation
 - Develop a Business Model
 - Seize the Opportunity
- Investors
 - Seek a proactive role
 - Provide positive inputs
 - Implement transparent Business Plan

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Stakeholders Obligations ..4

- Consumers
 - Develop Social Consciousness
 - Exercise an aware and proactive choice
 - Be the Opinion Leaders
- NEPRA
 - The Regulator

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