SIEMENS

Sustainability Report 2012

Pakistan

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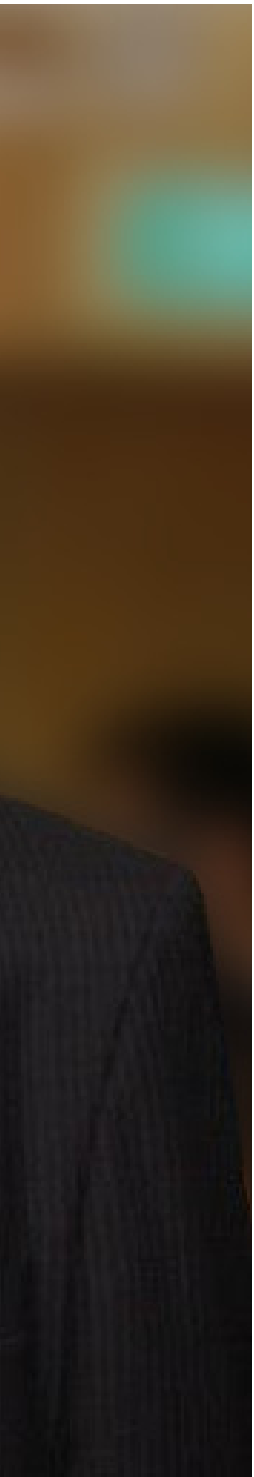


Message from the MD

“We embody all the principles of our global sustainability initiative including transparency and ethical business conduct”

At Siemens sustainable business means long-term success and profitable growth. Our sustainability efforts are based on operating as a responsible company that acts in the interests of its employees and society as well as the environment. Through our portfolio we address the key challenges of our century. Our solutions help our customers achieve their business goals while meeting global challenges such as urbanization, demographic change, climate change and globalization.

Siemens Pakistan is located in a dynamic region because it is estimated that while the emerging regions of Asia/ Pacific and Africa/ Middle East provide only about 32% of today’s global economic output, they will contribute 50% of growth by 2020. This places huge responsibility on our shoulders to conduct our business in a manner that it contributes to sustainability in society.

Siemens in Pakistan embodies all the principles of our global sustainability initiative including transparency and ethical business conduct. We have initiated collective action to fight corruption with other companies and stakeholders. A recent presentation at Pakistan German Business Forum reaffirmed our commitment to this cause.

Corporate Citizenship is the term that captures Siemens’commitment to making a positive and lasting contribution to the societies that we operate in. We focus our activities on the areas “Education & Science”, “Social” and “Environment”.

Siemens Pakistan contribution towards disaster management in the floods in 2010 and 2011 has been acclaimed by all shades and opinions and reflect our commitment to the country. In this report you can read about this and other efforts towards promoting sustainability in the country.

It is my pleasure to present to you our Sustainability Report for 2012.

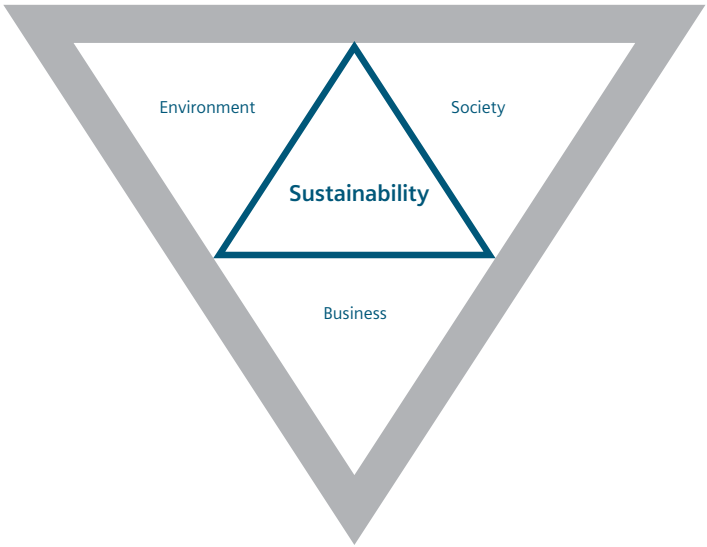
Guenter Zwickl
MD and CEO

Sustainability and Siemens values

As our history shows, our understanding of sustainability is closely linked to our company values – responsible, excellent, innovative. From the very first, Werner von Siemens insisted that his company fulfill its responsibilities to its employees, to society and to nature. To achieve excellence, to capture leading positions in the markets of tomorrow, to develop innovative technologies that help ensure the future viability of modern civilization – this has always been our vision and our challenge.

The three areas of sustainable development –

Environment, Business and Society- govern all our activities



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Sustainability at Siemens

Megatrends – demographic change, urbanization, climate change and globalization – are affecting and defining lives and economies throughout the world. These game-changing forces are shaping our business by creating new markets and opening up valuable new opportunities. Yet they also harbor significant risks that need careful management. Alone a value-based, sustainability-driven company committed to living its principles can minimize these risks and master these challenges to optimally leverage emerging opportunities for its stakeholders.

We've made the three areas of sustainable development – environment, business and society – the cornerstone of all our activities.

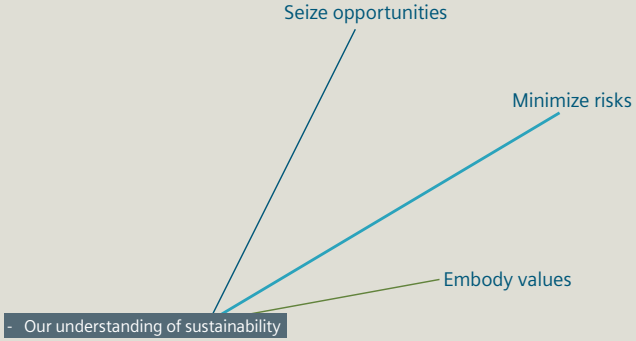
Principles of Sustainability

Sustainability these days is a buzzword used in many different contexts with many different connotations. But what does it mean for a multinational company? We at Siemens don't just talk about sustainability.

Acting responsibly for a successful future

In the area of the environment, we're providing innovative products and solutions to improve both our own ecobalance and those of our customers and suppliers. In the area of business, we're focusing on long-term value creation. And in the area of society, we're fostering our own employees and striving to be good citizens in all the communities in which we are active.

Although decisions in these areas are not always free of conflicting interests, we aim to make all them transparent and to find the best solutions possible. The responsible use of natural resources, targeted investments in future-oriented technologies that support profitable growth while offering customers competitive advantages, and a company ethic that goes beyond mere compliance with the law and places integrity at the center of business operations – these are the factors enabling us to drive sustainable development and to lay the basis for our company's successful future.



“The Crystal” in London, a sustainable city initiative by Siemens

Everything about the future of cities and the cities of the future

ABOVE – World’s largest exhibition dedicated to the future of cities.

RIGHT – The crystal- shaped building will serve as a conference center, urban dialogue platform and technology and innovation center all in one.

Siemens CEO Peter Löscher

“The development of our planet will stand or fall with the development of cities. Looking ahead to the urban future, the Crystal showcases a wide variety of opportunities and concrete solutions.”

The Crystal —
“A Sustainable Cities initiative by Siemens”

The Crystal – “A Sustainable Cities Initiative by Siemens” opened its doors on September 19, 2012. The new center for sustainable urban development in London’s East End houses the world’s largest exhibition devoted to sustainability within cities, a conference center featuring an auditorium seating around 270 people, plus workspace for Siemens employees and external urban development experts from around the globe. Designed as one of the most sustainable buildings in the world, the Crystal aspires to the best possible certification for sustainability in construction, “LEED Platinum” and “BREEAM Outstanding”.

In creating the Crystal, Siemens has established a fascinating venue, a meeting-place for the dissemination of knowledge. It is intended as a forum not just for international urban development experts, planners, architects and customers from the infrastructure field, but also interested citizens, students or schoolchildren, to discuss global trends, to get to know the latest technical developments and to share their experiences.

The unique exhibition area embraces topics such as water, traffic, environmental protection, urban planning and management, energy, buildings and lighting, safety, security and healthcare. Each “zone” features appealing, multimedia displays illustrating the challenges and trends associated with cities, technological solutions and existing case studies from cities around the world. Finally, the “Future Life” gallery shows what sustainable cities could look like in the middle of the century. The Crystal is also home to the global “Center of Competence (CoC) Cities”, where urban development experts both from Siemens’ Infrastructure & Cities Sector and other organizations collaborate as part of a “Think Tank” for sustainable urban development.

At the heart of the crystal is the world›s largest exhibition dedicated to the future of cities. Covering 2000 sq. meters, the interactive exhibition will guide visitors through the urban infrastructure of the future, focusing on possibilities for sustainable mobility, building technologies, power and water supplies, and healthcare.”

Siemens Environmental Portfolio

Power plants that generate electricity from the sun, factories and buildings that consume only small amounts of power, fast eco-friendly trains – our Environmental Portfolio is helping make the world a better place to live both today and in the future.

Renewable energies

We're steadily expanding our position in the dynamic renewables market - with innovative wind turbines that rank among the most realiable in the world, with hydro technology and with steam turbines for biomass plants.

Industry solutions

With our end-to-end automation technologies and a comprehensive array of industry solutions, we're increasing the productivity and flexibility of our customers in the industry and infrastructure segments.

Mobility

By networking transportation systems more effectively, our integration solutions for intermodal transport, traffic management, postal automation and airport logstics are making the movement of people and goods more efficient and environmentally compatible.

Power transmission and distribution

Our advanced power transmission systems enable low-loss power transmission of e.g. green electricity from offshore wind farms. With smard grid technologies we increase energy system efficiency - a crucial factor in sustainable energy management.

Fossil power generation

Our innovative technologies generate more electricity from less fuel. We boost the efficiency of coal- and gas-fired power generation and provide technologies for low-carbon fossil power generation.

Building automation

We're the preferred partner when it comes to maximizing energy efficiency in buildings and optimally protecting people and infrastructures. Our portfolio comprises products, solutions and services for building automation, fire safety, security and power distribution.

Healthcare

Demographic change poses massive challenges for the world's healthcare systems. Our innovative technologies enables healthcare professionals to detect illnesses early on and provide patients with optimal and affordable treatment from the outset.

Study tours and visits

Study tours and visits to Siemens Industrial Complex are conducted each year for students across Pakistan, professionals in the industry, policy makers, investors, officials of public utilities and technical branches of the armed forces of Pakistan and their affiliated institutes. For the Engineering Universities, Technical Institutions and technical branches of the armed forces of Pakistan this visit forms part of their curriculum.

Sustainability at Siemens Pakistan

We adhere to the global Siemens view of sustainability by living our values, preserving the environment and by leading by example in the areas of corporate citizenship. Our landmark projects in the country are living proof of our commitment to sustainability. Here are some of our sustainable projects that have been implemented in Pakistan.

50%

lower energy consumption

Healthcare Solutions

Efficient early detection saves lives

Al Razi Healthcare is a state-of-the-art medical diagnostic center in Lahore that aims to revolutionize diagnostic imaging services, many of which were not previously available from a single source anywhere else in Pakistan. The center is a first step towards establishing a premium-class facility that offers the full range of imaging and diagnostics services. Siemens installed an impressive array of medical systems that cover both state-of-the art diagnostic radiology services and clinical laboratories designed to meet international standards. The equipment includes the first large-bore 1.5T MRI scanner to be installed in the private sector in Pakistan, the MAGNETOM Espree, and a SOMATOM Definition dual-source CT scanner. With a special focus on women›s health and mother-and-child care, this is first center in the country to offer a full-field digital mammography system, the Mammomat Inspiration, as well as the Acuson S2000 ultrasound system for the gynecology and obstetrics disciplines. Together with the Multix units and X-class Color Doppler units installed in the facility›s two satellite clinics, the Siemens technology implemented here ensures the availability of state-of-the art diagnostic radiology services in this growing country. By saving 50% in energy consumption and using 97% recyclable material, the technology promises patient comfort while having lower operating costs and better image quality making it the most suitable for customers.

Airport Solutions

Green technology optimizes energy and lowers costs

The first ever green field airport constructed in Pakistan, the Benazir Bhutto Airport has Siemens green portfolio in the form of low energy LED-based airfield light fixture in place of conventional halogen lamps, halogen lamp has a lifespan of about 1000 to 4000 hours, LED lights are known to have much longer life-spans ranging from 56,000 to 100,000 hours thus the need to replace LED lights would be drastically minimized, which in turn would reduce lighting costs. This green technology aims to optimize energy using low energy LED based AFL fixture and introducing UPS for catering critical loads for CAT-II operations. The UPS reduces operating time of generating sets and consequently optimizes fuel consumption. The energy consumption is estimated to be 50% lower, subsequently lowering the maintenance costs. Moreover deployment of Air Field Lighting Control Systems (ALCS) for all Airfield Ground Lighting (AGL) equipment installed on the airfield to ensure control and monitoring functionalities for visual aids to enhance safety, efficiency, maintainability and reliability of airside operations.

97%

recyclable material

Building Solutions

Smart building technologies lower costs, ensure comfort and secure against failure

Dolmen Mall at Sea View Karachi is the biggest mall in Pakistan with attractive architecture and ambiance. Spread over three massive levels, it offers one-stop facility of retail and departmental stores, food court and restaurants, exhibition halls, in-door amusement park, day care center and a covered parking for 1600 vehicles. The technology is equally impressive. Siemens offered a uniquely devised solution for the safety and security of one million square feet area, energy conservation and distribution management for 12 MW power and automation for HVAC system. All the offered systems are integrated with building management system to give maximum conservation of resources. These building management systems are optimally matched so you profit not only from minimized installation and operating costs, but from a high level of security against failure as well. This is a first step towards the desired status of this being a green building in the future.

1m

sq. ft of area uses this technology

Energy Automation Solutions

High performance energy management systems are the smartest route to more productivity

Pakistan's first ever state-of-the-art Load Dispatch Center Upgrade project for the Karachi Electric Supply Company (KESC) included construction of the complete load dispatch center, which incorporates a SCADA energy management system, the remote terminal unit (RTU) and adaptation works, as well as the telecommunications infrastructure. A centralised control system, which uses a Siemens SINAUT Spectrum, was installed in the KESC load dispatch center to monitor and control the entire transmission network. The system allows all switching operations to be managed efficiently, thus helping operating staff to identify unexpected network modifications and to prevent errors that could potentially harm staff or damage equipment. A wall-sized monitor allows staff to keep an eye on the entire transmission network and to take immediate action in the event of network breakdowns. The equipment installed reduces the switching time required to control the overall system load, thus minimising outages and load shedding. The centralised control system ensures efficient load management in addition to providing other network control features, such as network planning, modeling, fault analysis, unit commitment, contingency analysis, load forecasting and energy management.

16m

is the number of electricity users in the city

Corporate Citizenship as a cornerstone of sustainability

Corporate Citizenship is very close to our heart here at Siemens Pakistan. Our accomplishments in this field motivate and drive our employees who feel proud to be working for a company that lives up to its social responsibilities. Siemens was in the forefront of the 2005 Earthquake relief efforts and was again seen as a leader in the devastating floods that hit the country in 2010 and 2011. It is not only our efforts in times of distress but our daily commitment to corporate citizenship that makes us stand out. Our valuable resources are utilized to conduct study visits for University students to our Industrial Complex as well as the technical branches of the armed forces of Pakistan and management trainees from different government departments. Internships offered to University students help them complete projects essential for their courses and our internship program trains young people to become useful members of society. Our interaction with universities like the recent Smart Grid seminars impart valuable knowledge to students preparing them for the challenges facing the country. Here are some examples of our Corporate Citizenship efforts.

ABOVE – With contributions flowing in from the Siemens family world wide, an amount of 2.5m euros was contributed towards flood relief of Pakistan.

BELOW – Compliance, which is understood to mean adherence to all applicable laws and regulations and the company's internal rules and regulations, is the basis for all our business activities of Siemens.

Collective action for a sustainable society

Siemens Pakistan is committed to the ideals of compliance and transparency in its business dealings. As part of a project to bring together all stake holders for collective action the company organizes various events. One such event was a presentation at the Pakistan German Business Forum where Siemens officials made a presentation calling on the business community to come together for joint action against bribery and corruption. More such events are planned in the near future.

Siemens promotes importance of transparent and compliant market behavior through Collective Action at PGBF

Corruption is a widespread menace that affects not only the developing countries but the world at large. Funds available for public welfare are drained through corruption and therefore not available for investments in infrastructure. Preventing corruption and violations of fair competition is a high priority for Siemens. The company›s boundaries for fighting corruption extend beyond the company by jointly engaging with other stakeholders through collective action

Long-term support for disaster victims
Flood relief at Siemens Pakistan

ABOVE – Siemens installed 5 filtration plants that supply clean drinking water to districts struck by the floods of 2010 and 2011. Clean water is now available to five districts including a school and a hospital.

RIGHT – With temperatures soaring to 45 degrees celsius in these areas during the summer, this easily available clean water is saving lives and reducing the threat of water borne diseases for a sustainable period of time.

50,000

liters of drinking water purified by Siemens membrane filters are available to flood victims in Pakistan in the next 10 years

8,000

people are drinking clean water everyday that includes school going children. The plants also serve as filling stations

40

flood affected families will be benefitting with a means for income from the vocational center set up at the model village in Sajawal

Pakistan was struck by floods in 2010 and than again in 2011. Floodwaters were so overpowering that whatever infrastructure had existed in the affected rural areas was completely wiped out. Siemens rose to the challenge and provided relief in terms of food, shelter and help to support infrastructure in the flood hit areas. 34 Diesel Generating sets were given to the army to ensure that medical camps, de-watering operations and mobile hospitals had a steady power supply. Later, these DG sets were permanently installed in hospitals located in different affected areas and are currently providing power to 3 million patients on average every year . As a last project in our relief efforts we have recently completed installation of five water filtration plants in the hardest hit areas

Clean water saves lives

Siemens Pakistan installed five water filtration plants in villages affected by the floods. Two of these plants were installed in Sujawal; one plant in Civil Hospital Sujawal and the other in Govt.boys High School Sujawal. The three remaining were installed at Belo Goth M.Khan Bijoro, Village Aelomallah near Sujawal and at High School Chur Jamali.

Each water filtration plant can purify 10,000 liters of water everyday thus providing clean drinking water to thousands of people in these areas, who were otherwise under major threat of contracting water borne diseases. The installation of these water filtration plants will greatly help in reducing such diseases and save countless lives. According to the population impacted, these plants are providing clean water to over 8,000 people ever day. These plants which will require little maintenance have a life span of 10 years.

The villagers, school masters and hospital staff were trained by Siemens engineers for the proper maintenance of these plants and were explained the advantages and need of this facility to be readily available to them. This facility will be available to children not only at home but at their school and hospital as well. The filtration plants at the schools and hospital will also serve as filling stations for adjoining villages.

Clean drinking water is now available to approximately 400,000 people. Every day, approximately 50,000 liters of water from these plants save lives by preventing waterborne diseases.

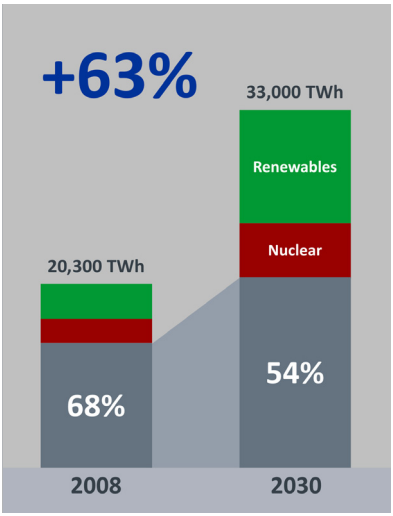
Help for Women Vocational Centre

Once the water receded, flood victims started going back to their homes. Pakistan Navy constructed houses for some families in Sujawal and Siemens decided to partly fund a Women Vocational Center at a model village for these families. Handicrafts and other traditional items made by women at this center will later be sold to different markets and displayed as exhibits at traditional events providing a means of income for these families.

Smart Grid: Bringing knowledge to power

What is a smart grid?

Smart grid is an intelligent, self-monitoring highly automated power supply network that is easier to control and monitor than a conventional power grid. In addition, smart grids are equipped with innovative information and communication technology to enable consistent data flow between the point where power is generated and the consumer, and vice versa. Unlike conventional power supply networks, where power generation is based on consumption, smart grids also control consumption, depending on the availability of electricity in the grid.



ABOVE – Today's power grids aren't at their limit yet. But with an additional 63% increase by 2030, they definitely will be stretched well beyond their capacities

RIGHT – Smart Grids are essential to ensure a safe supply of electricity worldwide – where demand will grow massively in the years to come

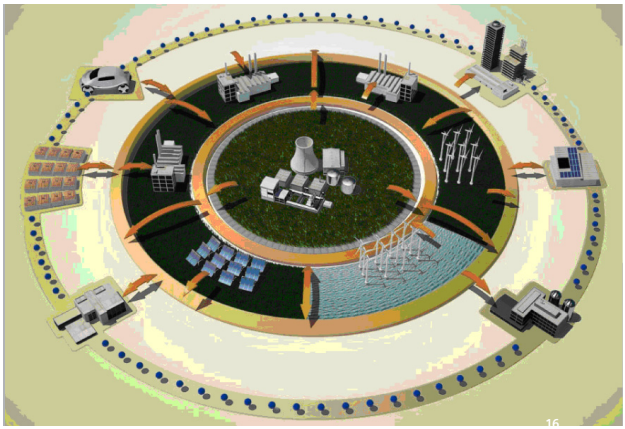
Knowledge sharing with students on Smart grid

A series of seminars were held in various universities to share knowledge on smart grid and renewable energy solutions to help students better understand the energy problems in the country and find sustainable solutions. Two such seminars were held at Mehran University of Engineering and Technology and LUMS (Lahore University of Management Sciences). For these seminars Dr. Michael Schwan - Head of Network Consultancy Siemens PTI (Power Technologies International), Germany had specially flown in to share latest knowledge with Pakistani students.

At both Mehran University and LUMS the faculty was very grateful to the Siemens Pakistan team for the discussions which helped the students and faculty to better understand the energy problems and their solutions.

Smart grid laboratory at LUMS

Siemens and LUMS (Lahore University of Management Sciences) have also principally agreed on the concept of establishing a Smart Grid laboratory in Lahore which will be open to Siemens experts, NTDC (National Transmission and Distribution Company) and DISCOs (Distribution companies)engineers and SSE students. This lab will serve as a platform for NTDC/DISCOs to bring their Challenges, Siemens to share technological systems, where as LUMS SSE engineers to develop Smart Grid solutions customized to local requirements.



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