

THE TRANSITION TO RENEWABLE ENERGY

**Remarks as Prepared for Delivery by
Mohamed T. El-Ashry
Chairman, REN21**

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Excellencies, Distinguished Delegates, Ladies and Gentlemen: It is a great pleasure to be part of the first panel to help start the discussion at WIREC 2008. Allow me to thank the US Government for hosting this global event which follows on BIREC 2005 and Bonn Renewables 2004 which I had the honor of being their facilitator. Allow me also to acknowledge with appreciation the leadership role that Mike Eckhart and ACORE play on behalf of renewable energy in general and in connection with this conference in particular. REN21 is proud to have been a partner in the preparations for the conference.

I would be remiss if I do not acknowledge with gratitude the initiative and support of the Government of Germany in organizing Renewables 2004 to build upon the agreements reached at the WSSD in Johannesburg to substantially increase the global share of renewable energy in the total energy supply. Bonn was the launching pad of BIREC, WIREC, and future IRECs.

In addition to an International Action Program of pledges and commitments, Bonn also launched REN21 Global Policy Network. REN21 has grown to provide reliable information, share ideas, catalyze action, and provide leadership to promote renewable energy. This leadership has become more important as concerns grow over energy security, energy poverty, and climate change.

I am pleased to announce the release last week of REN21 Renewables 2007 Global Status Report. It paints a remarkable overall picture of renewable energy markets, policies, industries, and applications around the world. I understand that you all have a copy of the report in your conference bag.

Renewable energy as we are going to hear throughout this conference, and witness at the ACORE Trade Show, is experiencing virtually a meteoric rise. Once a “niche” market, renewable energy has become a mainstream energy option. The renewable energy sector now accounts for 2.4 million jobs globally, and has doubled electricity generating capacity since 2004. The uptake of renewable energy with double-digit growth rates, and

30-50% for some technologies year after year, marks the beginning of a far ranging transition. The renewable energy movement is gaining strength: a technology like wind is becoming the single most important technology in power capacity additions in Europe. The movement is broadening in scope: more renewable technologies are becoming significant in more countries. And there is more political underpinning: the number of countries with renewable energy supporting policies is steadily growing and it is becoming a challenge to track them all.

According to the Global Status Report, **targets** for renewable energy exist in at least 66 countries including all countries in the EU, 29 US states, and 9 Canadian provinces. Cities around the world are setting aggressive targets and enacting policies to reach them. They are reaping the returns in cleaner air and well paying jobs. In particular, promotion policies for power generation have mushroomed. At least 60 countries—37 developed and transition countries and 23 developing countries—have some type of policy to promote renewable power.

At the same time, the finance community has integrated renewable energy into its mainstream portfolios. In 2007, more than \$100 billion was invested in **new** renewable energy capacity, manufacturing plants, and research and development—an increase of about 50% compared to 2006. This is truly a global milestone. Yet, perceptions lag behind this reality because change has been so rapid in recent years. But despite such rapid growth, renewable energy's share in global energy supply remains small. I will not take any more time now to present numbers. You will find them in the Global Status Report and later today, there will be a side event where the report will be presented in more detail.

While the numbers and trends are encouraging we still have a way to go. Achieving a low-carbon world is a long term challenge and the growth we are experiencing needs to be much greater and sustained over time and shared more evenly across technologies and regions.

We have seen that renewable energy market growth is being driven by policies and the positive market signals are in turn spurring governments to design and fine-tune supportive policies. This is creating a positive feed back loop, a kind of virtuous circle, which drives the market further. This positive feedback loop clearly shows that the debate over the value of free market forces versus policy interventions is artificial at best. Smart policies are those that create conditions to which market forces react positively. Removing market entry obstacles, like the US did in PURPA, and creating demand pull, like Germany and Denmark did with feed-in laws, are examples of such smart policies.

Another feature is that smart policies are founded on broad **political consensus**. Brazil developed ethanol a long time ago and has stuck to that policy even during periods of low oil prices, thanks to a wide political support. In China, the Renewable Energy Law passed the National Peoples Congress in 2005 after a long consultation involving government ministries, enterprises, and experts, including international input.

Renewable energy promotion policies also enjoy broad **public support** thanks to greater environmental awareness and rising fuel prices. And the public is acknowledging the local economic and social benefits associated with renewables, like income and jobs. Energy dollars, euros, or rupees stay in the local community, to be used for further local investment. I should mention here that in many least developed countries, the additional cost of imported oil has significantly surpassed the debt relief they received from donor countries.

Excellencies—current systems of energy supply and use are not sustainable in economic, environmental, or social terms. Continuing along the current path of energy development is not only incompatible with sustainable development objectives but also means that the world’s vulnerability to supply disruptions will increase with the expansion of international trade and competition. The continued steep rise in oil prices, now above \$100 a barrel, reflects the emerging concern about meeting the fast growing global demand for energy and the risks of dependency on fossil fuels which currently supply around 80% of global energy needs.

In 1931, Thomas Edison met with Henry Ford, who had invented the gasoline powered car, and told him: “I’d put my money on the sun and solar energy. What a source of power!” He continued to say: “I hope we don’t have to wait until oil runs out before we tackle that.” Seventy-six years later, investment in **new** renewable energy was more than \$100 billion in 2007. It has taken longer than Edison expected, but the transition from old energy to new energy is underway. However, this transition needs to be multiplied many times in order to attain the potential of renewable energy and significantly scale-up their share in the total energy supply.

A report last year by REN21 concluded that the potential of renewable energy technologies is huge. One of the report’s key findings is that the overall technical potential of renewable energy is several times the current total energy demand. This is particularly true for electricity generation. Solar photovoltaic (PV), for example, can be harnessed almost everywhere and its potential alone is many times higher than estimated global electricity consumption.

The high potential of renewable energy technologies represents great opportunities to countries not only for attaining higher energy security and fostering innovation and employment, but also for addressing climate change. In addition, in the large economies which still have a significant portion of the population without access to modern energy services, renewable energy can be a cost-effective way to bring sustainable development and eradicate poverty in rural and remote areas as compared to grid extensions.

We need to move beyond incremental gains and pursue national and global strategies for scaling up the development and uptake of renewable energy. Critical to securing a sustainable, affordable, and climate-friendly future for this generation and many to come is the ability of individuals and institutions to affect change in the way we generate and use energy. Governments at all levels, industry, multilateral institutions, NGOs,

academia, the media, and the general public—all of us—must take informed, long-term actions based on a spirit of common responsibility for our collective future.

WIREC 2008, thanks to our host, has brought us together for international leadership on renewable energy. I wish WIREC much success in taking us a major step further towards radically transforming the world's unsustainable energy systems and towards a renewable energy future. REN21 looks forward to the commitments and pledges that will be made here and to their follow up.