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**WADE MEMBERS LAUNCH 'DE 2012' CHALLENGE TO WSSD:
TO DOUBLE THE USE OF DECENTRALIZED ENERGY BY 2012 AND SO
INCREASE WORLDWIDE ACCESS TO LOW COST ELECTRICITY**

To mark the World Summit on Sustainable Development (WSSD), the members of the World Alliance for Decentralized Energy (WADE) have today launched a 'DE 2012' challenge to the world's governments to create energy market frameworks which will double the worldwide use of decentralized energy (DE) by 2012. DE is now seen as an optimal solution for providing cost-effective and clean access to electricity in developing countries.

Today, DE (which includes high efficiency cogeneration and decentralized renewable energies) holds only a 7% share of the world's power generation market. This compares to a 17% share for nuclear power and a 36% share for coal-fired electricity. The 'DE 2012' challenge is to move to a 14% share by 2012. Already, three countries (Netherlands, Finland, Denmark) have a DE share in excess of 40%.

A key aim of the WSSD process is to promote the use of clean, efficient and low cost energy solutions in developing countries. If this is to be achieved, WADE members believe that the WSSD process must address head-on the gross imbalance between central power generation (93% global share), which is characterised by high losses from transmission and distribution (T&D) systems and inefficient power plants, and DE. Electricity losses are running at 13.4% a year from developing country T&D systems while the efficiency of central power plants is only around 33%.

Commenting on this situation, WADE Chairman Tom Casten said:

"This waste of energy, which is directly associated with the traditional model of central power generation but can be largely stopped by the use of DE, is causing massive social, economic and environmental damage to the world's poor countries. Millions of people are failing to receive a supply of electricity as a consequence; national fuel bills are billions of dollars higher than they could be, and pollutant emissions are causing untold additional health and environmental harm."

For a genuine path towards sustainable economic development to be taken, the balance between central power and DE must therefore shift strongly towards the latter. The achievement of 'DE 2012', a mix of 86% central power and 14% DE by 2012, would be only the first step towards an optimal hybrid between the two in which the majority of new installed capacity would be based on DE.

WADE Director, Michael Brown, said:

"For WADE, a key indicator of the success of the WSSD will be whether it leads to the cessation of the catastrophic waste of energy taking place every day in T&D systems and fossil-fired central power stations in developing countries".

There are two main ways in which this can be done:

- Developing country governments must be encouraged to eliminate the many regulatory and monopoly-based barriers to DE which exist in almost every country in the world. If this is done, there will be abundant and growing commercial opportunities in developing countries for high efficiency on-site cogeneration, based on fossil or renewable fuels, in addition to PV, wind power and small-scale hydro.
- Power sector reform must be done in the right way. A new report from the World Resources Institute¹ confirms WADE research that electricity restructuring provides a clear opportunity to spur the transition to a future based on small-scale DE. Yet the report concludes that *"closed political processes and politically powerful groups constrain attention to sustainable development objectives."* In other words, power sector reform is so far derailing the opportunity for DE to cut energy waste and improve social and economic conditions in developing countries.

'Notes for Editors' follow on p 3-4. For more information, contact:

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¹ 'Power Politics – Equity and Environment in Electricity Reform', WRI, 2002.

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NOTES FOR EDITORS:

A. Transmission and Distribution Losses in Developing Countries

According to the International Energy Agency, developing country T&D losses stood at 13.4% in 1999, compared to OECD T&D losses of 7.4%. Losses in some countries are especially high: Nigeria – 32.7%; Colombia – 24.2%; Haiti – 57%; India – 22.7%; Albania – 54.4%; Kyrgyzstan – 32.4%. Important reasons for this include the use of older technologies, theft from distribution systems and inadequate maintenance. The underlying reason is the use of central electrical generation systems which require extensive and costly T&D systems and which are prone to high losses.

B. WADE Membership

WADE members include national cogeneration and DE organizations in Europe (including COGEN Europe), the USA, China, India and Brazil. Company supporters include Solar Turbines (a division of Caterpillar), Wartsila, Private Power and FuelCell Energy. In total, WADE's direct and indirect membership support includes over 200 corporations around the world.

C. What is Decentralized Energy?

WADE defines decentralized energy (DE) as the high efficiency production of electricity (and heating/cooling where possible) near the point of use, irrespective of size or technology. Proven DE generation spans a wide range of technology, capacity and energy sources. Two key divisions of DE are:

- High efficiency cogeneration with capacities from 1 kilowatt to over 400 megawatts (and which include reciprocating engines, gas turbines, steam turbines, Stirling engines, fuel cells and microturbines).
- Many renewable energy systems and energy recycling technologies which capture otherwise wasted energy. These can include photovoltaic and biomass systems, on-site wind and water turbine generators, heat recovery boilers and backpressure steam turbines.

D. The Disadvantages of Central Power.

The traditional model of centralized power generation has at least five drawbacks:

- i. The world's central fossil-fired plants cannot recycle by-product heat and thus waste about 70% of fuel energy. *Even state-of-the-art CCGT plants waste about 50%.*
- ii. Transmission and distribution (T&D) system losses are around 10% of global power supply. These losses are growing due to transmission congestion. *Global T&D waste exceeds the combined annual electricity used by the world's 3rd, 4th and 5th biggest economies (Germany, the UK and France).*
- iii. Economies of scale increasingly favour smaller plants. Decentralized electricity generation at or near users requires only half the capital of new central power generation plus new transmission and distribution, and DE plants can be substantially more efficient.
- iv. Power failures due to T&D congestion are inevitable. Existing transmission and distribution wires in many countries are already loaded, but new networks are costly and unpopular.
- v. The central power model is vulnerable to system disruption or destruction.

E. WADE's Activities

WADE is the only organization in the world which:

- Serves as a worldwide forum for all parties with an interest in decentralized energy
- Assembles cogeneration and DE data and statistics – WADE will shortly publish the first ever '*World Survey of Decentralized Energy - 2002*'
- Produces economic and environmental assessments of decentralized energy. WADE will publish a first analysis of the cost saving benefits of DE in September 2002.
- Provides direct advocacy on DE issues to key international agencies and organizations
- Works to ensure that worldwide power sector reform creates real market opportunities for DE
- Supports the creation of new national groups for cogeneration/DE
- Nurtures and supports existing cogeneration/DE groups throughout the world.