

30 July 2003

PRESS RELEASE

WADE PRODUCES “SEVEN GUIDING PRINCIPLES FOR EFFECTIVE ELECTRICITY MARKET REGULATION”

CLEAN, EFFICIENT DECENTRALIZED POWER SYSTEMS NEED FAIRER ELECTRICITY REGULATORY FRAMEWORKS

ELECTRICITY MARKETS SHOULD REFLECT SEVEN KEY PRINCIPLES

The World Alliance for Decentralized Energy (WADE) has produced a set of “*Seven Guiding Principles for Effective Electricity Market Regulation*” which it believes should guide electricity market regulation in every country to ensure that there is balanced and fair competition between traditional central power development and decentralized energy (DE) systems.

DE systems produce electricity at or close to the point of consumption – with low or zero emissions. They consist of high efficiency cogeneration and decentralized renewable generation (regardless of fuel, size or technology).

These systems include a range of proven, reliable and cost-effective power generation solutions. However in every country which WADE and its members have studied¹, a range of regulatory and institutional arrangements exist which have been developed to accommodate central power generation and its accompanying network of extensive transmission and distribution systems. These act as major barriers to DE deployment and so incentivise the more costly, less efficient and more polluting central power model.

The emergence of competitive DE generation and control technologies mean that this traditional configuration is usually no longer optimal. But system inertia, vested interests and inappropriate regulatory structures represent major hurdles for the adoption of these DE options.

The outdated regulatory arrangements need now to evolve to accommodate economically and environmentally advantageous DE. The process of evolution has barely started. WADE has produced the Principles to accelerate and guide this transition.

An associated report to elaborate the Principles will be published by WADE in August 2003. The Principles follow on the next page.

¹ WADE produced “A World Survey of DE” in 2002. It has also produced a National DE Survey of China in 2003; a National Survey of Brazil will be published in August 2003.

SEVEN GUIDING PRINCIPLES FOR EFFECTIVE ELECTRICITY MARKET REGULATION

1. There should be a fully independent and properly resourced regulator of the system. Their duties should relate to:
 - Reducing costs and prices;
 - Reducing emissions of pollutants (including greenhouse gases);
 - Minimising the risk of system disruption;
 - Avoiding 'boom and bust' cycles in the electricity market;
 - The development and promotion of innovative energy technologies.
2. Electricity system pricing should be fully cost reflective with no cross subsidies from one part of the system to another;
3. Power generation and supply companies should have no ownership or management interest in the network;
4. All generators of electricity should have fair and non-discriminatory access to the grid;
5. Use of T&D networks should be priced according to the services they provide and not in such a way as to incentivise distribution companies to avoid DE interconnection. In particular:
 - Any benefits which generators (including DE) provide to the system (for example, voltage and frequency support, grid reliability and stability, reduction in T&D losses, reduced requirements for 'spinning reserve') should be fully and fairly reflected in system pricing;
 - Equally, generators (including DE) should not be excessively charged for their system impacts (for example, 'shallow' rather than 'deep' connection charging). In particular, back-up charging for DE should fairly and transparently reflect system impact and no more;
6. Utilities should be required to engage in cost benefit analysis which can enable DE to be developed in areas where its local benefits outweigh the costs of constructing or upgrading new distribution facilities;
7. The electricity system should be subject to market based instruments, for example emissions trading, energy taxation and output-based standards, which fully reflect energy conversion efficiencies and internalise environmental costs of energy conversion.

30 July 2003

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NOTES FOR EDITORS:

WADE

WADE is a non-profit association working to accelerate the deployment of decentralized energy systems worldwide.

WADE Membership and Support

WADE members include national cogeneration and DE organizations in Europe (including COGEN Europe), the USA, China, India and Brazil. Company supporters include *Solar Turbines, Wartsila, Private Power, Caterpillar, MTU CFC Solutions, Capstone Turbine Corporation* and *FuelCell Energy*. In total, WADE's direct and indirect membership support includes over 200 corporations around the world. Other financial support has been provided by the governments of Norway, the USA and Canada, and UNIDO.

What is Decentralized Energy?

WADE defines decentralized energy (DE) as the high efficiency production of electricity (and heating/cooling where possible) at or near the point of use, irrespective of size, fuel or technology. Two key divisions of DE are:

- High efficiency cogeneration;
- On-site renewable energy systems and energy recycling technologies which capture otherwise wasted energy.

DE advantages over Central Power

The traditional model of centralized power generation has several drawbacks compared to DE:

- The world's central fossil-fired plants cannot recycle by-product heat and thus waste about 70% of fuel energy. Total losses from the world's central plants are equivalent to global energy consumption by the transportation sector.
- State-of-the-art CCGT plants waste about 50% of energy input.
- 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 consumed by Germany, the UK, Spain and France.
- 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.
- 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.
- The central power model is vulnerable to system disruption or destruction, including terrorist attack.