

TERRAPOWER: INNOVATIVE ENERGY SOLUTIONS

TerraPower® is a nuclear energy technology company based in Bellevue, Washington. The origins of the company began with Bill Gates and a group of like-minded visionaries who evaluated the fundamental challenges to raising living standards around the world. They recognized energy access was crucial to the health and economic well-being of communities and decided that the private sector needed to take action to create an energy source that would advance global development.

TerraPower joins other companies in a social entrepreneurial approach that seeks to improve technology to meet growing demand and counter the threats of climate change. In 2006, TerraPower's founders assembled premier professionals from business, government and research institutions to assess sources of scalable, sustainable and low-carbon energy options. Nuclear energy stood out as the best option to generate the electricity needed to increase access to clean water, health care and infrastructure that can improve living standards in the developing world without destroying the planet.

GUIDING OBJECTIVES



Enhance
engineered
safety



Minimize
energy costs



Offer **new**
options for
nuclear waste



Maximize
proliferation
resistance



Provide
reliable supply
of energy to all
nations

THE BENEFITS OF THE TRAVELING WAVE REACTOR

With deep technical knowledge and commercial experience, an expert team of computer scientists, nuclear physicists, engineers and operators set out to develop and deploy a new nuclear technology called the traveling wave reactor (TWR). In 2008, that effort became TerraPower's mission. TerraPower's unique approach will provide a more affordable, secure and environmentally friendly form of nuclear energy.

The ability of the TWR to use depleted uranium as fuel allows it to simplify the traditional nuclear fuel cycle. Uranium mining, enrichment facilities, reprocessing plants and storage facilities can all be greatly reduced or eventually eliminated. The result for future TWR owners and operators is enormous savings in fuel and waste disposition costs – as well as highly enhanced safety and environmental benefits.

While the TWR prototype is planned to be built outside of the United States, the design will utilize support provided by the U.S. government, national labs, domestic companies and universities to develop this new technology. This will enable the

United States to remain at the forefront of nuclear technology innovation, creating jobs and investment opportunities on American soil to support advanced energy technologies that will ultimately benefit all countries.

Since its founding, TerraPower's ability to combine experienced personnel and relationships with nuclear research facilities, corporations and universities worldwide allows the company to draw on expertise that might have been previously isolated. TerraPower is establishing an advanced reactor development network and supply chain that will bring associated traveling wave technologies to market.

By 2030, the world's population is expected to increase by 1.4 billion to 8.3 billion, and electricity demand is expected to increase 67 percent to support this growth. With nearly 1.3 billion people without access to electricity today, the market for better energy options exists now.

