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### **TerraPower's Traveling Wave Reactor**

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TerraPower is moving forward with detailed plans for a sustainable, economic, and safe nuclear reactor. The Traveling Wave Reactor (TWR) – a reactor in the 500-megawatt electric range - uses unique core physics to initiate a breed and burn wave which can be completely sustained in fertile material. This process allows the TWR to convert depleted uranium waste into usable fuel as the reactor operates, providing a sustainable base-load power source. TerraPower is the first company to create a practical engineering embodiment of this previously studied concept thanks to a powerful advanced reactor modeling interface, developed in-house, which enables the analysis of traveling wave reactor technology in a way that has not been possible before. This presentation will provide more detail about the origins of the TWR, the project's current status as well as some of the safety differences between TWRs and currently operating light water reactors.