

## Holtec International and Hitachi-GE Nuclear Energy Enter into an MOU for Dry Storage of Used Fuel in Japan

We are pleased to announce that Holtec International and Hitachi-GE Nuclear Energy, Ltd. (Hitachi-GE) have executed a Memorandum of Understanding (MOU) to introduce and deploy Holtec's canister-based dry storage and transport technologies for managing spent nuclear fuel in Japan.

Holtec's canister-based dry storage technology provides an alternative option to the traditional spent fuel dry storage technologies currently used in Japan. The technology options traditionally used in Japan are challenged by certain unique conditions such as regulator-mandated extremely low radiation limits, conservative regulatory release limits and extremely high seismic levels. Hitachi-GE is an industry leader in the Japanese domestic market with deep engineering and manufacturing expertise in the field of spent fuel management. Hitachi-GE metal casks have been previously licensed and implemented in Japan for storage.

"The MOU will synergize the expertise of both team members to offer a solution that addresses the unique conditions and regulatory regimen in Japan and the heightened need for stringent storage requirements focused on protecting public health and safety in the country," said Dr. Rick Springman, Holtec's Senior Vice President of International Projects.

The Team believes an ideal candidate that can be optimized to meet Japan's industry's needs is Holtec's HI-STORM UMAX (**U**niversal **MAX**imum shielding) dry storage system with a strength-welded transportable canister. The HI-STORM UMAX stores the canister vertically inside stainless-steel structures surrounded by a concrete overpack and the canister is laterally supported at its top and bottom extremities to render it capable of withstanding ultra-strong earthquakes. The HI-STORM UMAX system is qualified for 2.12g resulting horizontal and 1.0g concurrent vertical seismic loadings, which exceeds that of any other licensed system in the world; indeed, it exceeds the strongest recorded earthquake in human history.

This innovative design provides the highest level of safety and security to the public by offering high reliability for radiation shielding and containment of radioactive materials even in the most severe environmental events.

Protected from fires and projectiles due to the monolithic concrete structure, HI-STORM UMAX provides great resistance to tsunamis, allows easy and direct access to the canisters during



### HI-STORM UMAX

- ✓ Safe
- ✓ Secure
- ✓ Temporary
- ✓ Retrievable

*Holtec's HI-STORM UMAX Dry Storage System Providing Safety and Security for Workers, the Community and the Environment*

maintenance, inspections and eventual transport offsite. The HI-STORM UMAX system is currently operational at two nuclear plants in the United States.

The Holtec systems will be temporarily stored at the existing plant site until a final location is identified for long term storage. The compatible transportation cask is the HI-STAR 190, licensed by the U.S. Nuclear Regulatory Commission in 2017. The HI-STAR 190ML, a slight variation of the HI-STAR 190 accepted by Ukraine's State Nuclear Regulatory Inspector of Ukraine for VVER fuel, has already been manufactured and delivered for transportation of canisterized fuel to the Ukraine Central Storage Facility from Ukraine's nine nuclear reactors.