

2019 in Review

We bid a fond goodbye to 2019 which will stand out in our company's annals as a watershed year when we began the implementation of several new ambitious initiatives that will shape our endeavors for decades to come. The first new exciting undertaking is decommissioning of nuclear plants where we now own two reactor units and are on the verge of acquiring four more in the north of the United States. Much of our technology development work in 2019 focused on making decommissioning more palatable to the host communities by the development of ultra-high capacity *waste packages* to minimize the number of off-site shipments, of the strategies to enable the fuel pool to speedily enter the "cladding fire-free" status and of measures to shrink the facility's security perimeter. Devising state-of-the-art simulation technologies to improve the shuttered plants' protection against accidents and threats, and development of palliative technologies to deal with any anomalous used fuel storage system performance were also important components of our development effort in 2019. Our decommissioning organization has worked hard through the year to finalize the Holtec Decommissioning Fleet Management model that is aimed to set our Decommissioning and Dismantlement Program apart as a paragon of excellence reminiscent of our creed, "*A generation ahead by design.*"

The second notable enterprise is our renewed drive to accelerate the establishment of the HI-STORE Consolidated Interim Storage Facility (CISF) in the high desert of New Mexico that will centralize the Nation's inventory of used fuel presently scattered at various sites around the country. Our vision of the below-the-ground canister storage technology, conceived in the wake of the malicious assault of 9/11, is to make used fuel a harmless neighbor to the local communities. This technology will find its ultimate embodiment in the impregnable HI-STORE CISF worthy of the superb safety and security structure expected of a potentially large deployment of up to 10,000 canisters. To make the HI-STORE program even more radiation-safe and operation-friendly, several innovative cask designs were developed in 2019 which will be tendered for the U.S. Nuclear Regulatory Commission's review and approval in 2020.

The third new enterprise is the Company's foray in energy storage for which Holtec has teamed up with EOS, a New Jersey based start-up company, to establish HI-POWER, LLC. The HI-POWER manufacturing plant established in 2019 is poised to begin the delivery of the patented Zynth® technology based aqueous batteries by the hundreds beginning in February 2020. Through HI-POWER, we aspire to make it possible to synchronize the power delivered to the consumers with the contemporaneous demand despite the unsteady power generation from renewables like solar and wind. HI-POWER, in other words,

is aimed to play an indispensable role to make renewables a more practically useful component of the energy mix for carbon-conscious nations across the globe.

We are also pleased to report that our SMR-160 small modular reactor development program has been marching forward with completion of phase 1 of the Canadian Vendor Design Review this year, and with the launch of phase 2 in 2020. This regulatory review process, undertaken by the Canadian Nuclear Safety Commission (CNSC) provides a critical over-check of the plant design and operating characteristics to assure their acceptance under IAEA and Canadian regulatory protocols. We should recognize the unwavering support of our international allies, SNC-Lavalin of Montreal (Canada), Mitsubishi Electric of Kobe (Japan) and the consortium consisting of Energoatom and SSTC in Ukraine.

In our core business of dry storage, we also set a few notable milestones such as the delivery of world's first high capacity *double wall canisters for Russian origin reactors, VVER-1000 and VVER-440* to Energoatom (Ukraine) to serve their centralized storage facility due to be commissioned in 2020.

On the manufacturing front, the Company made a strong push for hardware quality improvement by leveraging robotics in the welding of complex shapes, high precision laser cutting, and friction stir welding of copper and aluminum alloys.

In 2019, 123 Holtec dry storage systems were loaded at 21 plants, bringing the total number of systems designed and manufactured by Holtec safely storing used nuclear fuel around the globe to over 1,350.

The final denouement in our industrial achievements came in the waning days of 2019 when Holtec successfully completed the turn-over of the fiendishly complex fuel dismembering and dry storage facility (known as ISF-2) to the Owner (Chernobyl plant) after eight years of meticulous remedial construction, extensive debugging of imbedded and hidden defects, and completion of scores of pre-operational tests to enable the final commissioning of the site to begin in February 2020. The multination funded, EBRD-managed ISF-2 interim storage facility was originally designed by an international contractor who had defaulted and finally exited the project in 2007 after failing to meet Ukraine's stringent regulatory requirements. Holtec took over the project in 2011 after the ill-designed and partially finished facility had lain neglected and unmaintained for nearly a decade. For our company, the triumph at Chernobyl will serve as an iconic achievement in the decade that has just receded into history.

We celebrate the spirit of the holidays that showers cheer and joy on our readers and wish everyone a happy and healthy 2020.