

Glimpses of Holtec Happenings in 2020

The year 2020 marked many milestones for Holtec, in spite of a global pandemic that has challenged us all.

Holtec's decommissioning sites, Oyster Creek in Lacey Township, N.J., and Pilgrim Station in Plymouth, M.A., set new levels of excellence in every relevant metric of performance. Continuing to build on Holtec's fleet approach to decommissioning, the two sites shared resources, worked as a team, and learned from each other's best practices to dismantle and deconstruct buildings, structures and equipment and manage spent fuel.

At Oyster Creek, a total of six buildings and three storage tanks have been removed. Components have also been removed, including motor control centers, control rod drive instrumentation, numerous piping and valves, and an entire bank of hydraulic control units. Segmentation of the reactor internals at Oyster Creek resulted in the most time-efficient steam dryer segmentation in boiling water reactor history, until that record was recently surpassed by our Pilgrim project; the decommissioning team completed this project in 40 workdays with 100% safe and error-free performance. The segmented pieces were loaded into Holtec's high-capacity HI-STAR 330 Class B/C waste containers. These newly designed containers have a larger capacity than standard low level waste containers, helping to reduce the number of overall shipments traveling through the local community on the way to a licensed offsite waste disposal facility. *Each of the above accomplishments directly translates into reduced dose to the workers and environmentally-friendly operations.*

Oyster Creek's next endeavor will include relocating all of its fuel assemblies from the spent fuel pool to the site's Independent Spent Fuel Storage Installation (ISFSI) pad.



Workers at Oyster Creek Use a Tool Attached to an Overhead Crane to Segment the Steam Dryer, Currently Under Water (Top); Oyster Creek Associates Safely Move a Holtec HI-STAR 330 Class B/C Waste Container to Store Segmented Components (Bottom)

Similar decommissioning activities have occurred at Pilgrim Station, including removal of the site's iconic stack, cleaning and removal of buildings, and preparation of reactor internal segmentation.

Removal of the drywell head, dryer-separator pit shield blocks and head insulation package prepared the Pilgrim cask loading team for its three-month loading campaign, which included moving 748 used fuel assemblies out of the spent fuel pool and placing the assemblies into 11 Multi-Purpose Canisters (MPCs), with each MPC containing 68 used fuel assemblies.



Demolition and Removal of a Fabrication Building at Pilgrim Station (Top); Pilgrim Workers Safely Transporting Spent Nuclear Fuel to the Newly Constructed ISFSI Pad (Bottom)

The MPCs were loaded into Holtec's HI-STORM 100 dry storage system on Pilgrim's newly constructed ISFSI pad. *It should be recalled that the HI-STORM storage system is the only one in the U.S. to have been qualified as one capable of withstanding a crashing fuel and armament loaded F-16 fighter jet by the Federal Government's Atomic Safety and Licensing Board in 2005.*

The next step in the reactor dismantling is to flood the dryer-separator cavity to ensure that the work will be completed safely and with negligible radiological risk for the workers.

In November 2020, the U.S. Nuclear Regulatory Commission (NRC) approved the transfer of the Indian Point Energy Center (IPEC) licenses from Entergy Corporation subsidiaries to Holtec International subsidiaries; the license transfer is expected to occur in April 2021, adding to Holtec's fleet of decommissioning sites. Holtec and Entergy also submitted a joint application to the NRC in December, requesting approval to transfer the license for the Palisades Power Plant to Holtec after the facility shuts down in Spring of 2022.

The NRC licensing process continues for Holtec's proposed HI-STORE Consolidated Interim Storage Facility (CISF) site in Southeastern New Mexico. HI-STORE CISF will aggregate used fuel canisters presently stored across the country into one secure location, storing used nuclear fuel in Holtec's proven subterranean HI-STORM UMAX dry storage system. The Atomic Safety and Licensing Board (ASLB) stood behind these plans when it issued an order in early September 2020 denying legally untenable motions made by Fasken Land and Minerals, Ltd., and Permian Basin Land and Royalty Owners. The ASLB noted that

the contentions did not respond nor identify any new information that was not already included as part of Holtec's original application. The NRC closed the public comment period on the draft Environmental Impact Statement (EIS) on September 22. Holtec submitted all responses to the NRC's requests for additional information (RAIs) and Holtec awaits the final EIS scheduled to be published by July 2021. "We want to again thank those who participated in the public scoping meetings, the virtual webinars and those who submitted written comments identifying focus areas for the NRC," says Ed Mayer, Project Director for HI-STORE CISF. "We also wish to thank those providing ongoing support of HI-STORE. Your support is vital to the continued and future success of the project, and its positive impact on Southeastern New Mexico."

The year 2020 was the most notable one yet for Holtec's SMR-160 program. Not only did Holtec celebrate its tenth anniversary of the birth of the SMR-160 program, the Company also successfully completed Phase 1 of the Canadian Nuclear Safety Commission's Pre-Licensing Review and, as recently announced, submitted its SMR-160 topical report to the NRC for review. Holtec's SMR-160 is gaining interest around the world, including areas such as the Czech Republic, Northwest England, India, Ukraine and more.

Another significant milestone for SMR-160 includes the U.S. Department of Energy (DOE) award of Advanced Reactor Demonstration Program funding to Holtec's SMR-160 small modular reactor program. The total award over the next seven years is valued at \$147.5 million (DOE share is \$116 million) and will

support the SMR-160's commercialization readiness so it can be licensed and deployed in the near term.

Holtec continued to provide dry storage support, equipment and expertise with safety and proficiency. Southern California Edison's twin unit San Onofre Nuclear Generating Station (SONGS) concluded their dry storage program on August 7 when the 73rd and last MPC of spent nuclear fuel was placed in its designated below-grade storage vault, Holtec's HI-STORM UMAX dry storage system.

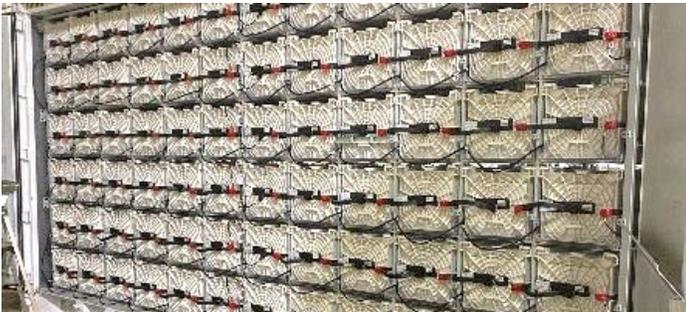


*73rd and Final MPC Loaded into Holtec's
HI-STORM UMAX Dry Storage System at SONGS*

Another historic milestone was reached on December 14 at the Chernobyl Nuclear Power Plant (ChNPP) in Ukraine, when Holtec-trained technicians loaded the second double-walled canister (DWC) [a Holtec patented design] with RBMK reactor spent nuclear fuel into the site's Interim Storage Facility (ISF-2). The first fully loaded DWC had been placed in storage on November 18.

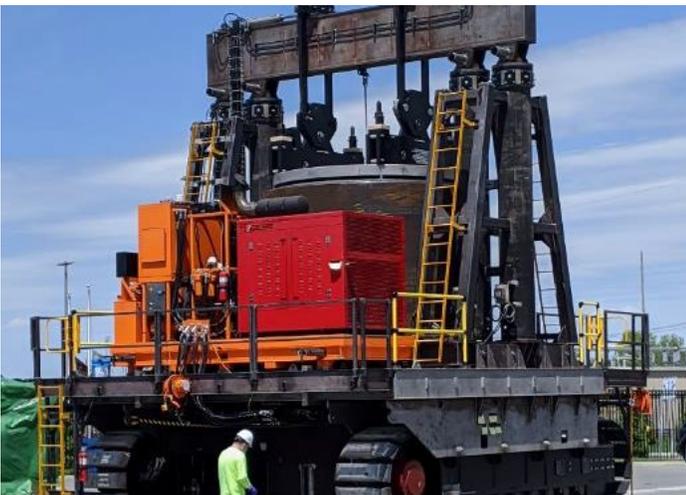
HI-POWER, Holtec's manufacturing subsidiary co-owned with Eos Energy Enterprises, began production of the Znyth® Direct Current (DC) Battery Energy Storage Systems (BESS) in July at our

manufacturing plant in Turtle Creek, PA. In the short five months since start up, HI-POWER has opened its manufacturing facility, has attracted multiple companies for their large energy storage projects and completed its first BESS container manufactured at the plant.



*First Battery Energy Storage System Container
Manufactured by HI-POWER*

Other innovative endeavors include the design and deployment of Holtec's HI-TRAN 300, a vertical heavy load hauler, and HI-BRIAN, a portable robotic welder designed to drastically reduce radiation dose to the loading crew during multi-purpose canister (MPC) shell-to-lid welding evolutions.



Holtec's HI-TRAN 300 Vertical Heavy Load Hauler



Holtec's HI-BRIAN Robotic Welder

Around the globe, Holtec took a strong stance against COVID-19. Incorporating a comprehensive and holistic response that not only included all of each locale's requirements, but also included additional conservative measures, established plans and policies that ensured the safety of the associates, their families and the general public. Using these principles, associates at all of Holtec's locations continued to innovate, design, build and complete their jobs, safely and efficiently without any facility closures.

"Even in this unprecedented year, Holtec associates have looked to the future with innovation, creativity and a passion for achievement and excellence. As a result, our industry, our clients and our stakeholders have benefited with products, services and capabilities that are second-to-none – a true amalgamation of design, precision and safety," says Joy Russell, Holtec Senior Vice President and Chief Strategy Officer.

From all Holtec International associates around the globe, we wish you – our valued stakeholders – a safe, healthy and prosperous 2021.