

## Waste Management Symposia

Panel Session 111, Thursday March 9, 2017

Consolidated Interim Storage of Used Nuclear Fuel - a draft DOE siting process and how Private Fuel Storage can Contribute

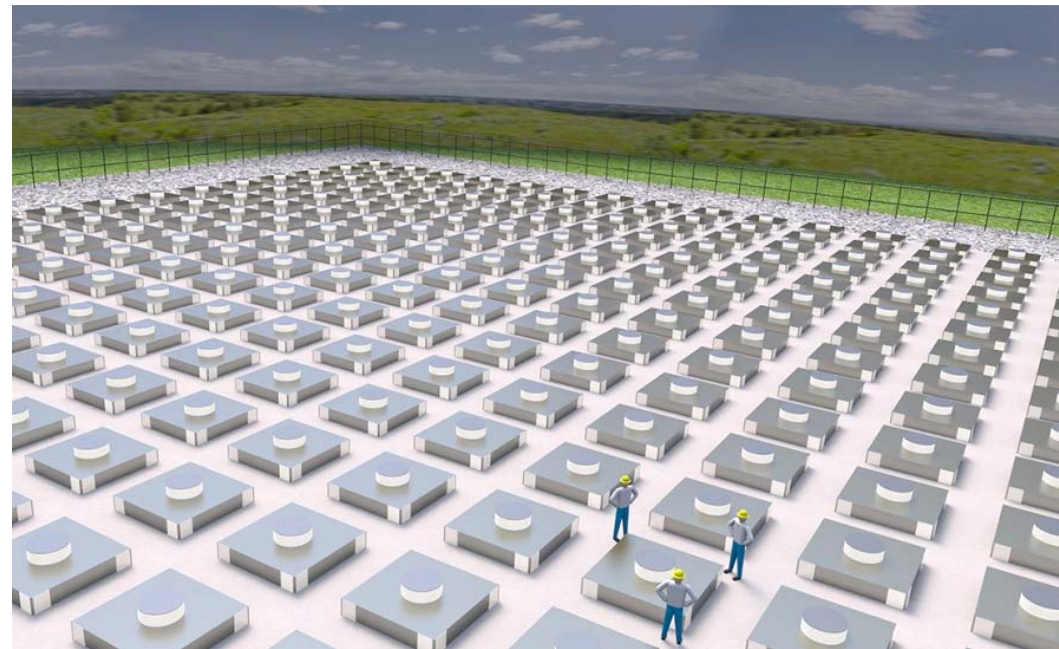


# HI-STORE: A Consolidated Interim Storage Facility for Used Nuclear Fuel and HLW

By: Joy Russell, Vice President of Corporate Business Development,  
Holtec International

# How Private Initiative Can Contribute

- Provide an unprecedented opportunity to DOE to make good on the government's long standing promise to defuel nuclear plant sites
- Supplements long-term repository contemplated by DOE
- Allows removal of used fuel from reactor sites much sooner than awaiting a repository
- Provide a highly cost efficient away-from-reactor storage mode
- Eliminate the stakeholder and political challenges associated with reactor-site used fuel storage by relocation to a site that has strong local and state consent and support



# Holtec & ELEA Team



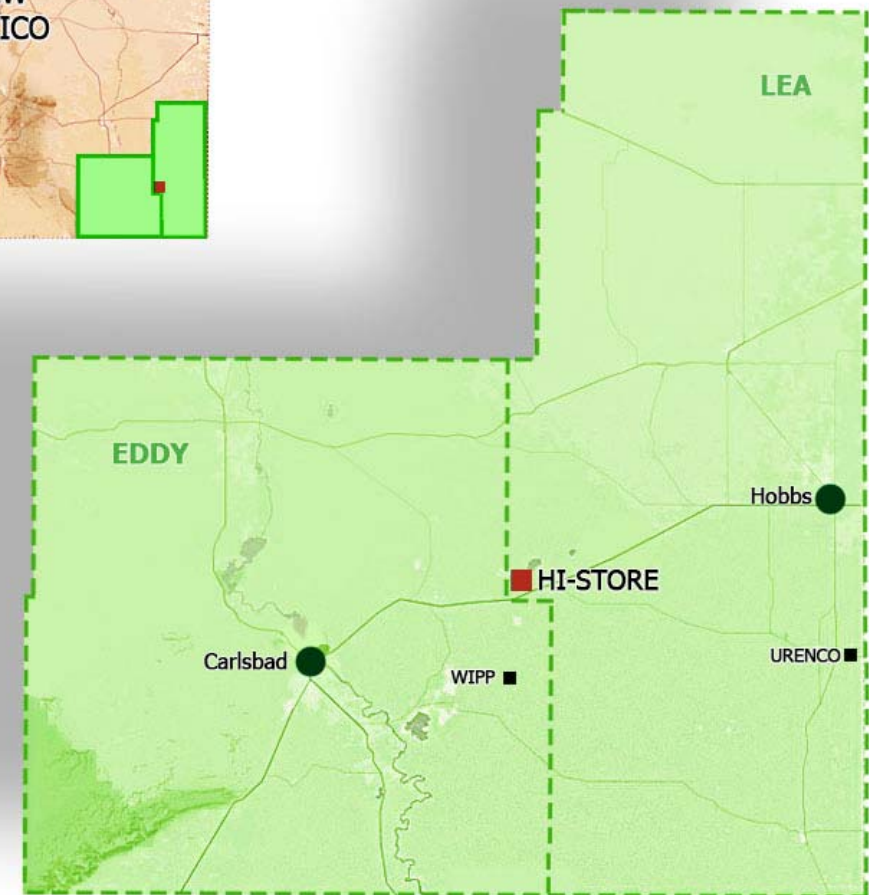
- Holtec International
  - ✓ U.S. Company with U.S. manufacturing
  - ✓ Advanced dry storage technology
  - ✓ Experience in licensing fuel storage facilities
- Eddy-Lea Energy Alliance, LLC
  - ✓ Long-standing alliance of the Cities of Carlsbad & Hobbs and the Counties of Eddy & Lea
  - ✓ Formed in 2006 under New Mexico's Local Economic Development Act



Holtec Heavy Manufacturing Center, Camden, NJ

# HI-STORE Site Location

- 1,000 acres: Geologically stable, dry, elevated land
- Developed infrastructure: electric, water, roads & rail
- Remote location:
  - ✓ 35 miles from nearest town
  - ✓ Midway between Carlsbad & Hobbs, NM
- Populace: Robust scientific & nuclear workforce
- Strong support:
  - ✓ Local communities
  - ✓ State and Local government



# HI-STORE Technology: HI-STORM UMAX

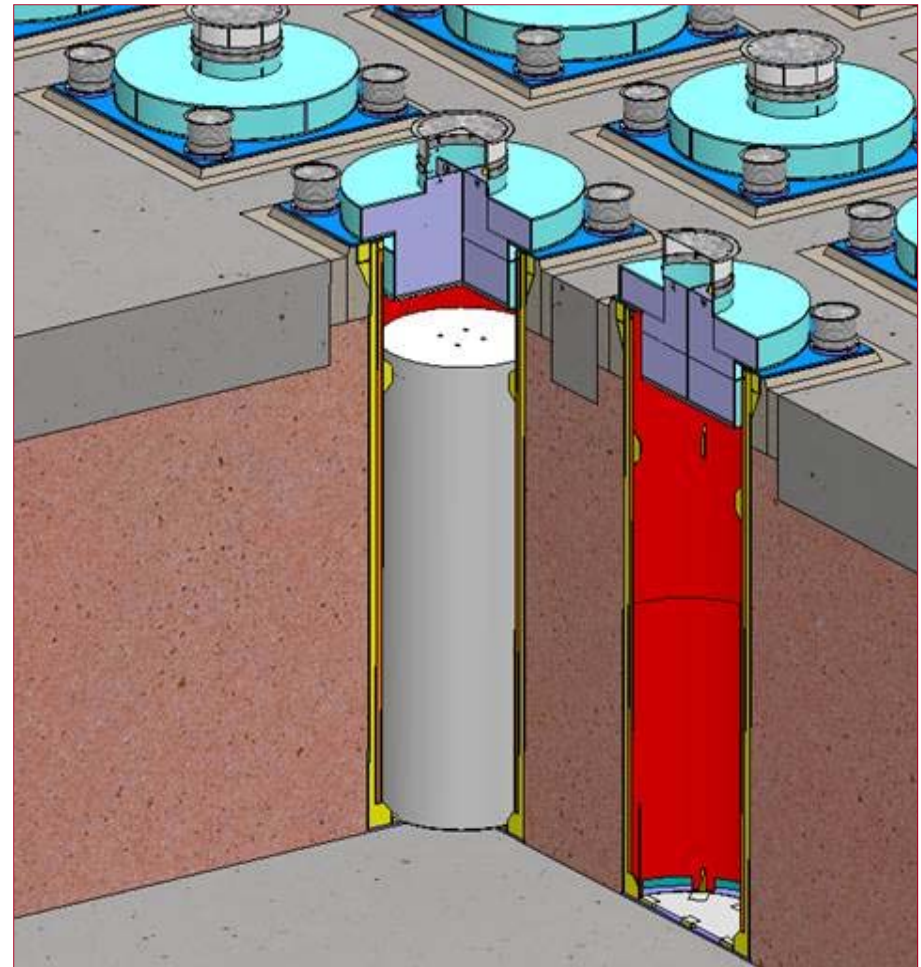


# In-Ground View of HI-STORM UMAX



# HI-STORE Characteristics

- Holtec's Below grade Dry Storage Technology
- Canister is entirely below grade
- Designed store canisters up to 75 ¾ inches in diameter, and up to 213 inches tall
- Will store any US-origin commercial nuclear fuel currently packaged in dry storage canisters, or stored in the nation's fuel pools
- No repackaging of fuel required



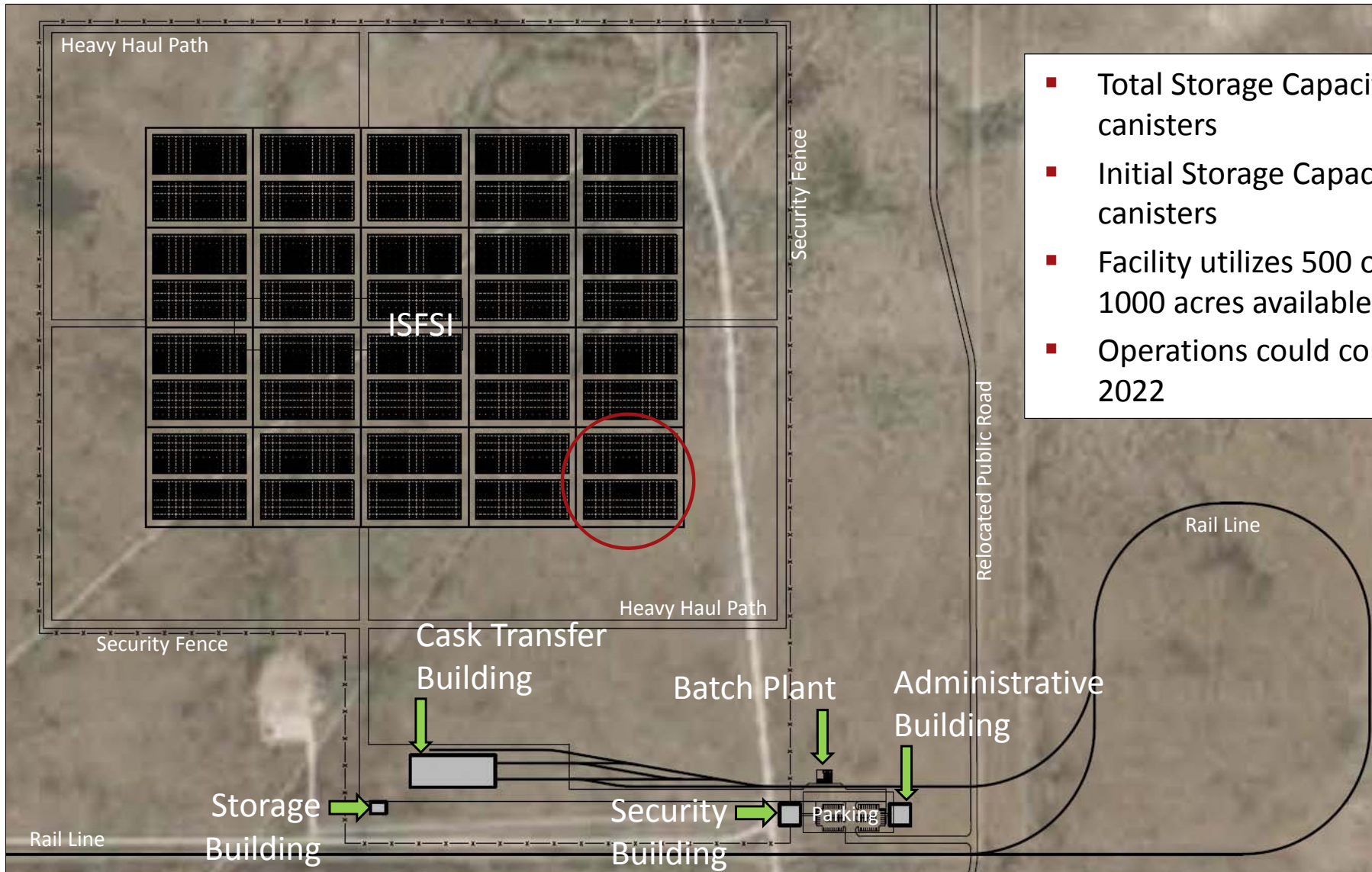
# HI-STORE Characteristics

- Operational Advantages
  - ✔ Single System
  - ✔ Canister placed into storage or removed in less than one shift
- Maximizes Security
  - ✔ Facility is visually inconspicuous
  - ✔ Profile < 2 ft tall
  - ✔ Less visible target from the air
  - ✔ Reduced visibility from public land
  - ✔ No area of obstructed view
- Maximizes Safety
  - ✔ Minimize dose to environment & crew
  - ✔ Virtually immune to environmental disasters - hurricanes, floods, tornados, earthquakes
  - ✔ Designed to withstand crashing aircraft or on-site fire without any radiological consequences





# HI-STORE Site Layout



- Total Storage Capacity 10,000 canisters
- Initial Storage Capacity 500 canisters
- Facility utilizes 500 of the 1000 acres available
- Operations could commence 2022

# Two Part Approach to Licensing



## Part 1. HI-STORM UMAX FSAR Amendment

- August 2016 Submitted HI-STORM UMAX License Amendment:
  - ✔ Added NUHOMS 24PT1 canister for vertical storage
  - ✔ Standard HI-TRAC (transfer cask) and HI-STORM UMAX designs are utilized for NUHOMS canisters
- In succession update HI-STORM UMAX certificate to:
  - ✔ Add canisters from specific shutdown / decommissioned plants
  - ✔ Add all canisters licensed to store SNF

# Two Part Approach to Licensing



## Part 2. Site Specific License Application

- Pre-submittal Meeting Dec 6, 2016: Environmental Report focus
- Pre-submittal Meeting February 1, 2017: Outline of the SAR focus
- NRC audit February 22&23, 2017: pre-application audit of Holtec's HI-STORE application
- March 31, 2017: Submit Site Specific License Application per 10 CFR 72
  - ✓ Initial application - 500 canisters
  - ✓ Future amendments for additional canisters up to 10,000
  - ✓ Reference the amended HI-STORM UMAX Certificate and FSAR for technical details

# Questions

