Amusement Park Towers

These towers at the Stone Mountain Amusement Park in Atlanta, Georgia, are part of a custom adventure trail park. The towers are in a triangular arrangement and are two storeys with the floor heights at 15 and 25 ft. Steel truss bridges connect the towers at the 15 ft level. An elevated triangular play area at the 15 ft level is created by suspending a net between the three truss bridges. At the 25 ft level there are two rope suspension bridges between towers, which exert substantial horizontal forces. These are resisted by the tower cross bracing and lower truss bridges. Adding to the experience, the towers deflect when the bridges are occupied, and geysers are situated around the towers, shooting water up to 35 ft in the air. The tower components were shipped to the site in containers, then assembled with a crane.

Schematic Design: Primeplay by WhiteWater West Industries. Structural Design: Bourcet Engineering.

Arctic King Collapsible Fuel Tank

Traditionally used for temporary remote locations by the Department of National Defence (DND), collapsible fuel bladders have serviced mineral companies, remote site construction projects as well as disaster relief and helicopter operations for decades. Collapsible fuel bladders are also currently being used as part of the effort to clean-up abandoned fuel drums in the Arctic. SEI Industries' Arctic King collapsible fuel tank is manufactured from fabric specifically designed for liquid fuel storage in sub-zero climates. Constructed from a proprietary high-durability fabric unique to SEI Industries, the Arctic King exceeds all US military specifications and has UV and hydrolysis resistance for a longer life expectancy than any other urethane collapsible fabric tank. The tank continually adjusts to any volume of liquid so that air cannot accumulate, reducing condensation to protect fuel quality and extend equipment life and safety.

Vanadium Redox Battery

Gills Onions operates one of the largest, sustainable fresh-cut onion processing plants in the world in Oxnard, California. Gills generates a significant portion of its electricity onsite, using onion waste as fuel for two 300 kW fuel cell units. However, Gills still depends on the local utility when their demand exceeds onsite capacity. Prudent Energy's Vanadium Redox Battery Energy Storage System (VRB-ESS®) enables the plant to charge the VRB-ESS from the fuel cells when plant demand is low, then discharge that power during peak periods. This allows Gills to substantially reduce its electricity bills while increasing the proportion of energy it derives from renewable sources.

Owner: Gills Onions, Oxnard, California . Manufacturer: Prudent Energy (Troy Barrie EIT, Rick Blacker PEng, Kirk Daniells PEng, Matt Harper PEng, Andy Klassen PEng, Brandon Lee PEng, Gary Lepp PEng, Kemal Ozgur PEng, Alison Platt EIT, Colin Vincent EIT, Frank Zheng PEng).