

SMR-160 at Age 10

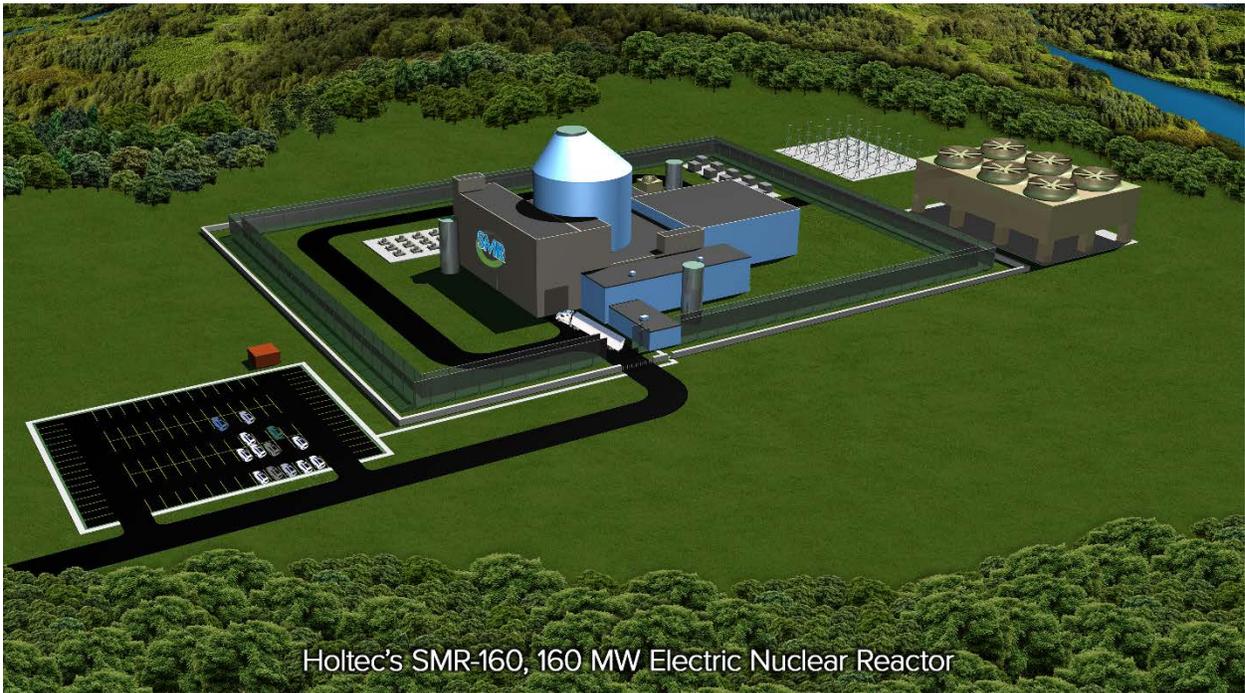
We mark the tenth anniversary of the birth of our SMR-160 small modular reactor this month buoyed by the thought that its promise to render nuclear energy generation as benign as solar and wind - its kindred carbon free technologies - has been realized in full measure. The now finished *candidate design of SMR-160* shows enormous margins of safety under the whole range of potential adverse scenarios, such as the disaster at Fukushima or wanton acts of terror and is validated as a truly *walk away safe reactor*. We believe SMR-160's robust safety credentials will instill renewed confidence in nuclear energy amongst peoples of the world. It is this compelling promise of safety that has sustained our journey to SMR-160's tenth birthday this month even though our development effort has not thus far received the governmental financial succor that has historically nourished every reactor program in the world. We look upon the second decade of SMR-160's evolution with great hope as it enters the design confirmation phase followed by the first full scale deployment. Having completed the first phase of the Vendor Design Review process with CNSC (Canada's nuclear regulator), we are now also engaging with the USNRC to demonstrate the unimpeachable safety case for our reactor. The business case for our SMR-160 plant demands that, after a period of maturation, it be *commercially competitive with (carbon-emitting) combined cycle plants powered by natural gas*. We have concluded that, like solar, our reactor's capital and operating costs will plummet as we summon our cost cutting innovations and proceed to build successive units. The secret sauce behind the promise of rising competitiveness of our SMR-160 reactor is our relentless drive to leverage modern digital information and management technologies that are waiting to be introduced to the nuclear industry.

"Government's support and credit for a carbon free footprint is essential for the next phase no doubt; but in the long run, to prosper, SMR-160 must be competitive with every other form of power generation. Towards this end, we have built a 310 million dollar facility in Camden to bring down the cost of manufacturing of SMR-160 components which we hope to replicate in other countries. Thanks to the able support of our partners, such as Kiewit and Mitsubishi Electric, we now know that our aggressive cost target is a mission possible," says the intrepid entrepreneur and our CEO, Dr. Kris Singh who, with 125 patents and scores of refereed technical papers to his credit, has proved prescient in leading Holtec successfully through several technology endeavors in the past.

SMR-160's calling card includes its ready deployability in any locale with or without a cooling water source, its small footprint (under 2-1/2 hectare per unit), its emergency planning zone shrunken to its property boundary (thanks to the unconditional guarantee of negligible radiological releases from its sealed containment), its incomparably strong physique (as a bulwark against disasters such as earthquakes, hurricanes and the like), its *black start* and load following capability, its minuscule site boundary dose (aided by all nuclear commodities placed deep below the grade), and its ability to foster grid resiliency through distributed generation and *island mode* capability.

As a regulated industry, our success in realizing our reactor's full potential, however, hinges on a critically positive regulatory posture towards our innovative but practical design solutions, which we expect will materialize.

To us, SMR-160 is the vehicle to bring carbon-free and inexpensive electricity to the more than two thirds of humankind that still does not have access to reliable and affordable electrical power which inhibits economic growth which aggravates socioeconomic conditions leading to corruption, poverty, and extremism. Our mission to deliver a commercially viable, supremely safe, carbon-free and 24/7 stable source of power is thus an urgent global imperative before increasing fossil-based generation chokes our planet.



Holtec's SMR-160, 160 MW Electric Nuclear Reactor

Welcome to your exciting second decade, SMR-160!