

SURFACE AREA REQUIRED TO POWER THE UAE WITH SOLAR

Based on 0.15KW peak capacity per square meter of land area and 2400 hours per year of insolation

The cost per KW capacity of the four planned nuclear reactors is \$3,642 based on the \$20.4 billion contract awarded. The cost per KW capacity of recently constructed CSP plants is \$4,200 or approximately 15% greater. However, nuclear facility operational and insurance costs are greater. Also externalized cost factors such as storage of spent fuel and decommissioning are not accounted for. The life span of the nuclear reactors is 60 years, over which time another \$20 billion will be spent on maintenance and operations per the signed contract. The life span of a CSP plant is indefinite with proper maintenance which is far less expensive. Over a 60 year lifespan comparison with the nuclear reactors, assuming \$200k per day maintenance vs the \$900k per day nuclear plant maintenance contract, the CSP plants would save \$15b and be the more economical option over the entire period despite the additional \$3b upfront construction expense.

