

## Solar Thermal Evaporation & Desalination

**Clean Water/Desalination -** this \$18 billion (worldwide) market is growing at a rate of 55% annually, yet much of the industry is still exclusively dependent on natural gas.<sup>1</sup>

**Artic Solar's** ultra-high efficiency KING Collector generating temperatures in excess of 400°F when used with natural gas backup, it provides the lowest cost of energy available today as well as a substantial reduction in green house gas emissions (see chart below).

Our advanced system combined with a heat pump deliver a proven 49% reduction in thermal energy usage in a multi-effect distiller (MED) desalination system.<sup>2</sup>

Unlike standard solar systems, the KING collects both direct and indirect sunlight, allowing for usage across the globe. No moving parts and a dust-repellent coating mean minimal O&M costs. Our low-profile roof-mounted systems blend into any environment.

Complete project design, engineering services & financing available.

1 International Desalinization Association Report: Technical Review and the Economics of Water Desalinization 2013

2 Pilot Demonstration of Concentrated Solar-powered Desalination, Stuber, et al. in Desalinization 2015



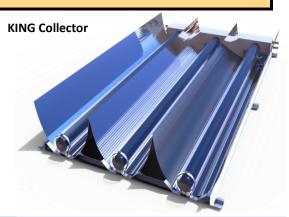
Multi–Effect Distillation



Oil & Gas Production water process affluent or brine evaporation Landfill leachate processing, Municipal Waste Treatment using Solar Thermal

U.S. Patent # 9,383,120 B1

Solar Thermal Concentrator Apparatus, System and Method



## **Benefits**

- a Zero Liquid Discharge
- a Increased efficiency of spray evaporation systems
- a Provides Distillation or Evaporation
- a 26% federal tax credit including all components materials and installation labor (USA)
- a Non-tracking lowers O&M costs
- a Collects both direct and diffused sunlight

Savings & Green House Gas Reductions

Example: 100Kw System (100 XCPC's)

Natural Gas = 14,800 Therms saved /yr

174,000 lbs. of CO<sub>2</sub> and 220 lbs. No<sub>x</sub> Electric = 300,000kWh saved per year 410,000 of CO<sub>2</sub> and 1,498 lbs. No<sub>x</sub> HIGHEST REDUCTIONS PER m<sup>2</sup> OF ANY SOLAR TECHNOLOGY ON THE MARKET! CALL TODAY FOR A QUOTE

