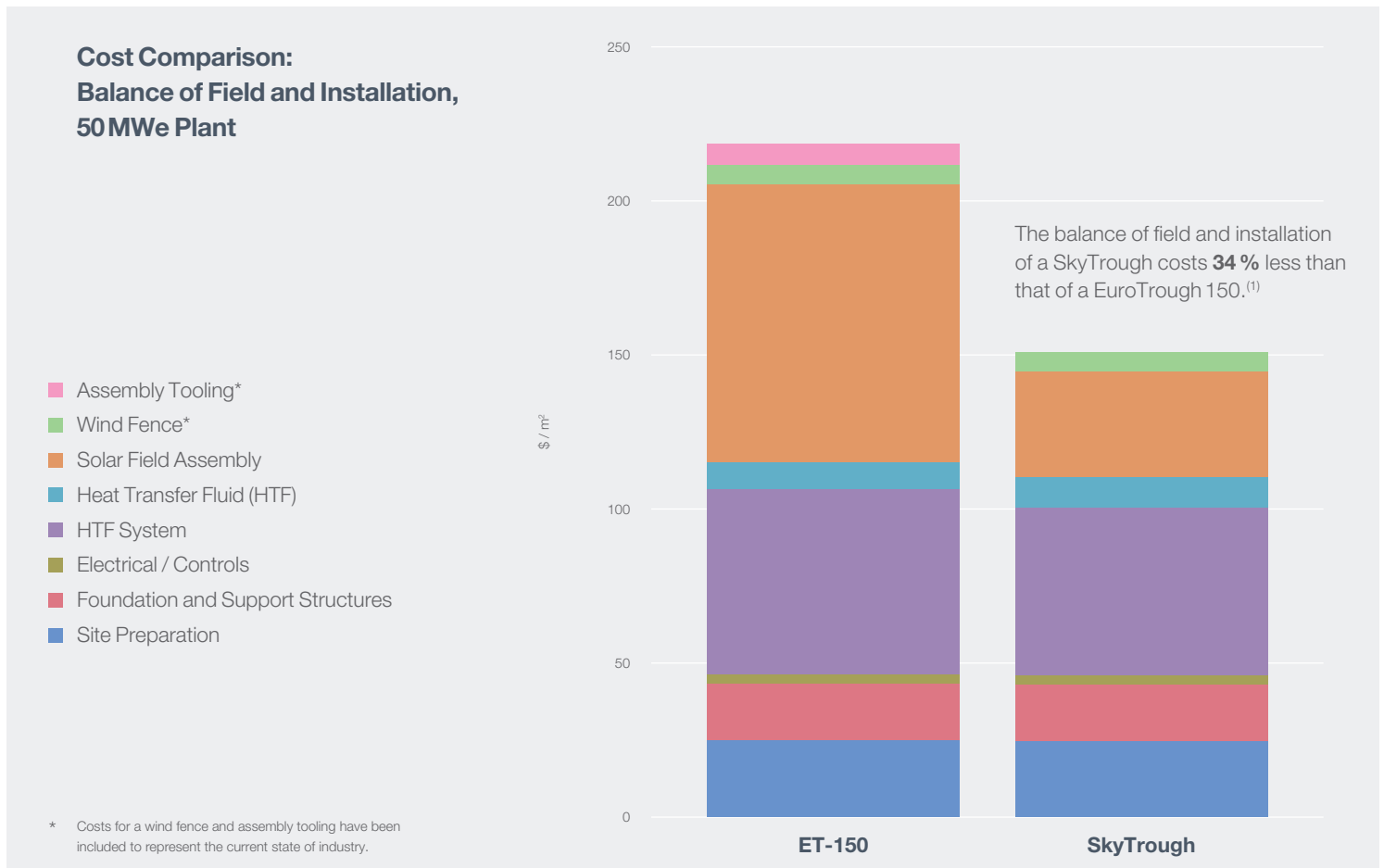


Cost Comparison:

Balance of Field and Installation

The SkyTrough® parabolic trough was engineered to minimize the cost of solar heat produced; hence, great attention was applied to reduce installation costs. Additional cost savings result from the smaller solar field size needed because more energy is produced per unit of aperture area compared with other parabolic trough technologies.



Above, the installed cost of the solar field minus the collector equipment (i.e. collector installation, heat transfer system equipment⁽²⁾), and heat transfer system installation) for a SkyTrough® parabolic trough are compared to those of a EuroTrough-150 (ET-150)⁽¹⁾.

The basis of the comparison is a solar field sized at a reference condition of 1000 W/m² to provide heat to run a 50 MW-electric power plant. The greatest savings are seen in the “Solar Field Assembly” slice; at an estimated 133 Man-Hours to install each SkyTrough® collector, the savings on labor alone can be as much as 64%. These savings result from the snap-fit design of the frame and the slide-in installation of the reflectors, with no optical adjustment required. The superior optics of the monolithic, ReflecTech® mirror film based reflector result in higher sun to heat efficiency, and a smaller solar field for a given thermal output. The smaller field results in reduced costs for site preparation, foundations, field piping, and heat transfer system equipment.

(1) Costing information was derived from the CSP Parabolic Trough Plant Cost Assessment by the WorleyParsons Group, scaled for equivalent thermal output.

(2) See “Cost Comparison: Solar Collector Assembly” for a detailed comparison of the collector costs.