



Concentrated Solar Power “Pie in the sky?”

AMR has conducted numerous projects in the renewable energies sector and has worked closely with experts in this field, including the German Aerospace Centre (Deutsches Zentrum für Luft- und Raumfahrt)

Key findings:

- The rising oil price and major advances in technology are signaling the rebirth of concentrated solar power
- High Voltage Direct Current technology means that solar electricity can be transferred from Northern Africa (where it is produced) to Europe with a retention rate of c. 91% - higher than ever before
- The market is booming and installed capacities are set to increase by CAGR 29% until 2025

What is the future of concentrated solar power?



Parabolic troughs

Concentrated solar power (CSP) is an efficient and viable technology for electricity generation using mirrored collectors to focus solar rays onto a receiver, harnessing power on a utility scale. CSP plants are located in areas of the world which can have up to 340 days of sunshine in a year.

CSP is now experiencing a renaissance due to higher electricity prices and improvements in the technologies. New High Voltage Direct Current (HVDC) technology also makes it possible to transmit power from the deserts of North Africa to Europe with much higher retention rates than before. The market is now set to boom.

AMR has recently analysed the market for CSP in detail and forecasts a rapid increase in installed capacity in the short to mid-term. The forecast growth of 29% per annum is conservative when compared to the growth of other renewable energies, e.g. wind power which grew at CAGR 52% between 1971 and 2000.

Spain is currently the main focus for new projects with four projects underway. Globally, a further c. 1GW is in planning. There are several CSP technologies under development, but the most advanced of these is the parabolic trough, used for the world's nine continuously operating Solar Energy Generating Systems (SEGS) in California's Mojave Desert that were built between 1984 and 1991.

With the exception of the power tower and parabolic trough, the other CSP technologies are still in the testing phase; however, these are set to be released on a commercial scale soon and will drive further growth in this exciting industry.

Power Tower



Stirling-Dish



Linear Fresnel

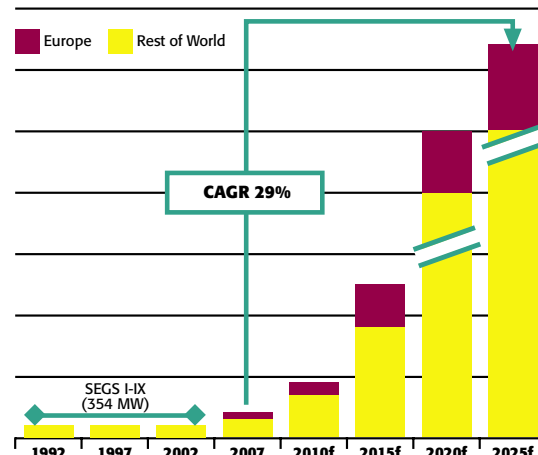


Updraft Tower

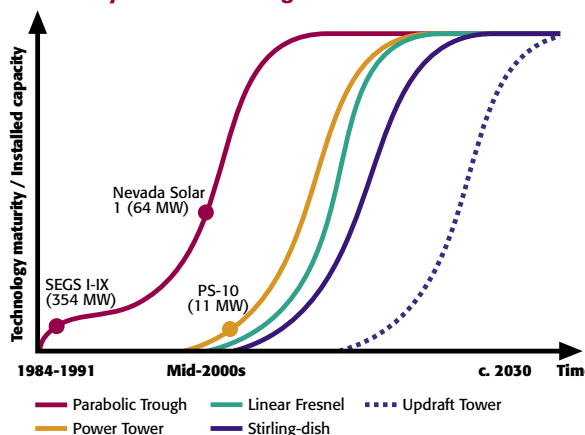


(Updraft Tower Image courtesy of Schlaich Bergemann Solar)

CSP installed capacity forecast (MW)



CSP life cycle – Path to large-scale commercialisation



About AMR International

AMR International has 17 years of experience dedicated to supporting investors and companies make the best acquisition and investment decisions. AMR International is the world's leading management consulting firm specialising in commercial due diligence. With offices in London, Frankfurt and New York, we have conducted nearly 1,000 commercial due diligence assignments worldwide. The majority of our work is with mid-market companies although we have completed assignments on transactions valued over £1 billion. Key sectors in which we have extensive experience are consumer goods and services, industrial products, media and publishing and support services.



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