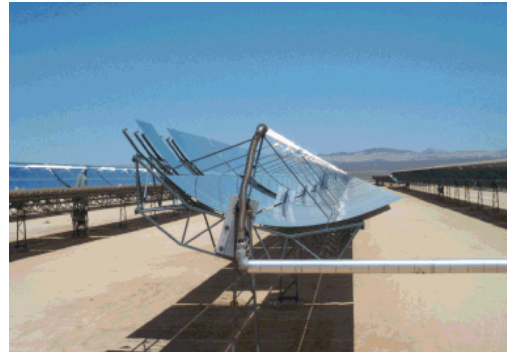


PROJECT SUMMARY

ASSESSMENT OF CONCENTRATED SOLAR POWER AS AN ENERGY SOURCE FOR THE ARABIAN CANAL PROJECT

PROJECT SUMMARY

Bridgestone Associates Ltd. was contracted to prepare a preliminary assessment of the applicability of concentrated solar power (CSP) as an energy source for the Arabian Canal Project in Dubai. The assessment included evaluation of different types and technologies for CSP. It also included an assessment of the applicability of CSP for desalination of seawater for use in the Arabian Canal Project.



PROJECT STATISTICS

Client: YRG Sustainability Consultants and Limitless Development
Project Type: Concentrated Solar Power (CSP) preliminary assessment
Project Name: Arabian Canal Project
Project Location: Dubai, UAE

PROJECT DESCRIPTION

An assessment was undertaken on the concentrated solar power technologies that are currently available or that are under realistic commercial development and whether these would be applicable and commercially viable as a sustainable energy source for the new Arabian Canal Project. This assessment included identification of the existing technologies for CSP as well as those that are under development and that have a realistic chance of becoming commercially viable. These technologies include:

- Parabolic troughs
- Parabolic dish
- Linear Fresnel systems
- Central tower collectors (“power towers”)

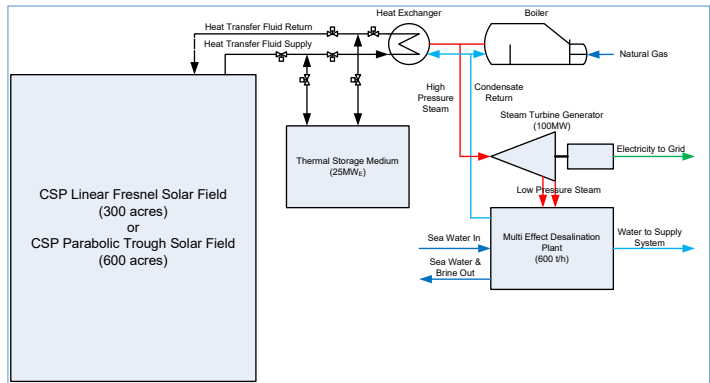
Each of these technologies was reviewed and their comparative costs and advantages and disadvantages assessed. Factors evaluated included land requirements, operations and maintenance requirements, water requirements, technical sophistication and development, past history, efficiency, reliability, capital costs, and applicability to other applications including desalination. Also evaluated was the ability of the system to



ride through short duration changes in solar impact (e.g. during passing clouds).

The integration of CSP and each of the different types of CSP into an integrated sustainable energy supply plan was evaluated and discussed. A summary comparison was developed for each major alternative technology.

The use of CSP in a desalination system was investigated and briefly evaluated. Water is a key requirement for most CSP systems (for cooling water in the steam cycle and for mirror washing), so availability of adequate water is important. Water may also be produced using the available thermal energy from the solar field in an integrated combined heat and power desalination system.



A brief comparison was developed for CSP versus Photovoltaic solar power generation.

