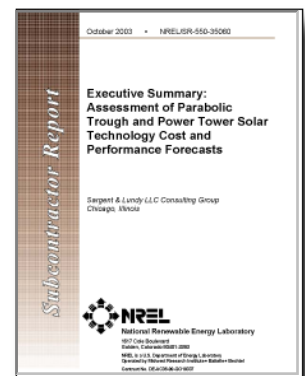


# Assessment of Parabolic Trough and Power Tower Solar Technology Cost and Performance Forecasts

*Sargent & Lundy LLC Consulting Group  
Chicago, Illinois*



**National Renewable Energy Laboratory**

1617 Cole Boulevard  
Golden, Colorado 80401-3393

NREL is a U.S. Department of Energy Laboratory  
Operated by Midwest Research Institute • Battelle • Bechtel

Contract No. DE-AC36-99-GO10337

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NREL Technical Monitor: H. Price

Prepared under Subcontract No. LAA-2-32458-01



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**ASSESSMENT OF  
PARABOLIC TROUGH AND POWER TOWER SOLAR TECHNOLOGY  
COST AND PERFORMANCE FORECASTS**

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## ACRONYMS AND ABBREVIATIONS

<b>Term</b>	<b>Definition or Clarification</b>
°C / °F	Degrees Celsius/degrees Fahrenheit
ADL	AD Little
ATS	Advanced Thermal Systems
CHP	Combined heat and power
CRADA	Cooperative Research and Development Agreement
CSP	Concentrating Solar Power
DOE	Department of Energy
DSCR	Debt service coverage ratio
DSG	Direct steam generation
EERE	Office of Energy Efficiency and Renewable Energy (a part of the DOE)
EPSG	Electric power generating system
EU	European Union
GEF	Global Environmental Facility
GWe	Gigawatts-electrical
HCE	Heat collection elements
HRSG	Heat recovery steam generator
HTF	Heat transfer fluid
HTGR	High-temperature gas-cooled reactor
IEA	International Energy Agency
IGC	Intergranular corrosion
ILR	Intermediate load range
IPP	Independent power producer
IRD	Industrial Research & Development
IRR	Internal rate of return
ISCCS	Integrated Solar Combined Cycle System (s)
km	Kilometers
kPa	Kilopascals

## ACRONYMS AND ABBREVIATIONS

<b>Term</b>	<b>Definition or Clarification</b>
kW	Kilowatts
kWt	Kilowatts-thermal
LCOE	Levelized costs of energy
LEC	Levelized energy cost
MACRS	Modified Accelerated Cost Recovery System
MW	Megawatts
MWe	Megawatts-electrical
MWt	Megawatts-thermal
NRC	National Research Council
NREL	National Renewable Energy Laboratory
O&M	Operation and maintenance
PR	Progress ratio
PTC	Energy Production Tax Credit
PV	Photovoltaic
R&D	Research and development
Sargent & Lundy or S&L	Sargent & Lundy LLC
SCA	Solar collector assembly
SEGS	Solar Electric Generating Station
SNL	Sandia National Laboratories
SunLab	SunLab comprises researchers from Sandia National Laboratories and the National Renewable Energy Laboratory working together on Concentrating Solar Power technology for the Department of Energy
TES	Thermal energy storage

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