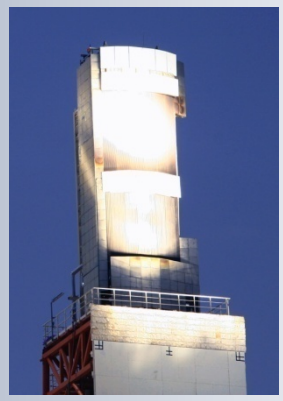
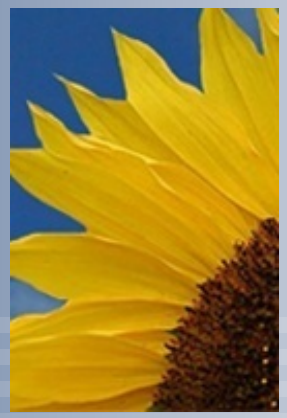
BrightSourceEnergy™

Technology Overview





January 2009

BrightSource Energy Snapshot

Mission: To design, develop and operate the world's most cost-effective and reliable large-scale solar energy projects

- **Business:**
  - Develop and build large-scale solar power generation plants for utilities at prices that compete with fossil-fuel plants, using proprietary technology
  - Develop and build solar-to-steam plants for industrial applications
- **Financial Strength:**
  - Over $160M in corporate financing from key strategic investors including: VantagePoint Venture Partners, Morgan Stanley, Google.org, BP Alternative Energy, StatoilHydro Ventures, Chevron Technology Ventures, Black River, Draper Fisher Jurvetson, and DBL Investors (a spin-off from JP Morgan), and others
- **Team:**
  - Includes all of the key senior managers of Luz International, which designed and built more than 350 MW of solar thermal plants built in the 1980's
  - World class project development team with over 20GW of power projects developed, constructed, and managed
- **Locations:**
  - Headquarters in Oakland, California, 30 full-time employees
  - Subsidiary BrightSource Industries (Israel) located in Jerusalem, 90 full-time employees

BrightSource Energy - Significant Accomplishments

- Raised $160 million equity
- Signed 900MW PPA with PG&E
- Launched 6MW Solar Energy Development Center in Israel
- Generated Super Heated Steam (550^{C}) with proprietary technology
- Developing 4.2GW in southwest U.S.

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Market Drivers

Energy Independence

- Every day the U.S.
  - Needs 20M barrels of oil to make up for production shortfall
  - Borrows $2B from overseas countries
  - Pays $2B to international countries
  - Consumes every barrel of oil that it bought, nothing is left over

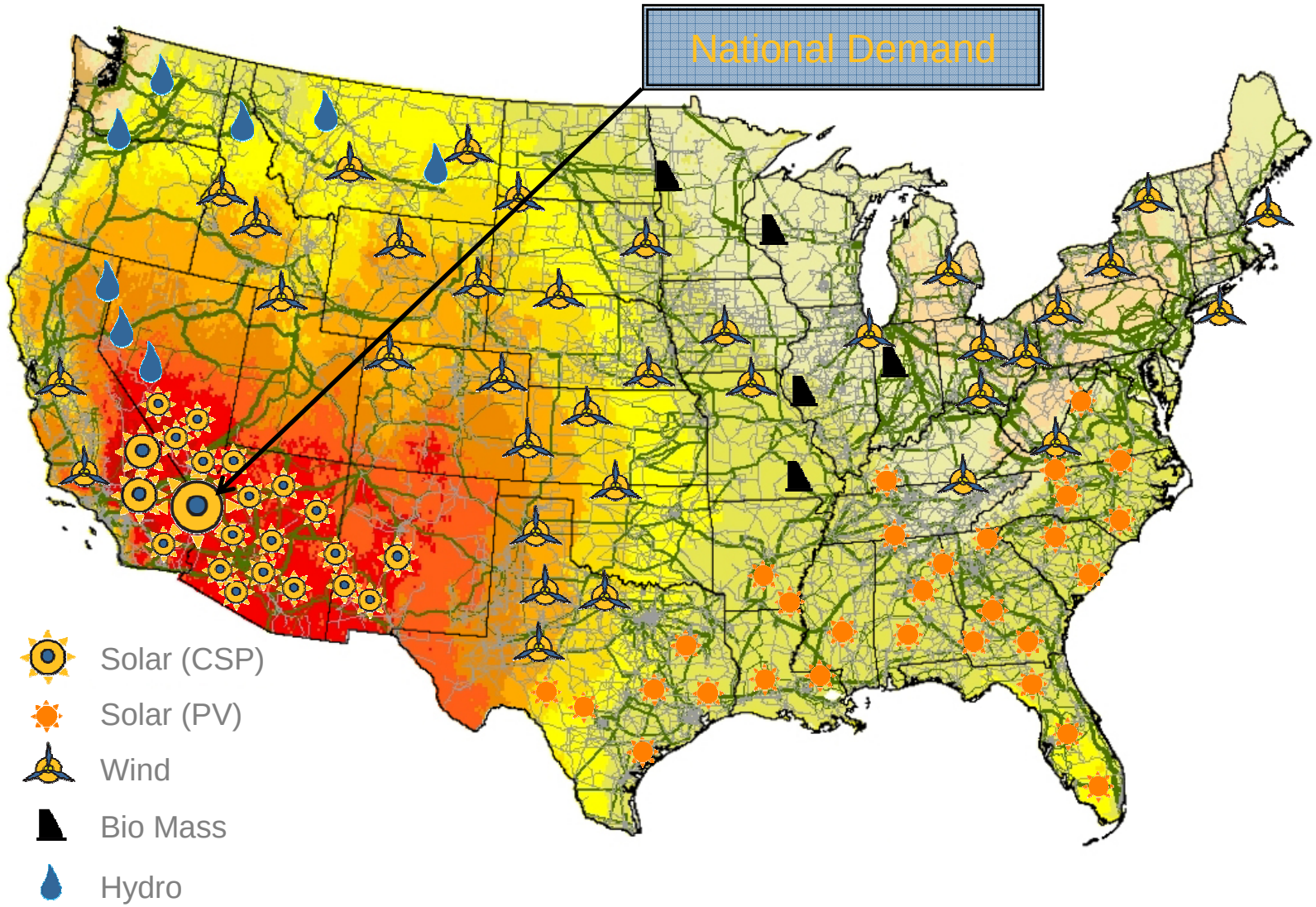
Rising Global Electricity Demand

- Projected to increase by 50 percent from 2005 to 2030 – more if plug-in electrical cars replace gasoline-powered cars

Climate Change

- To reduce CO2 to 450ppm
  - Replace 15,000 GW (included trans) of worldwide energy demand
  - 42,300 new 1GW energy plants needed by 2050 with vehicle electrification to hit GHG reduction targets
  - $105 Trillion dollars of investment in CO2-free generation

Integrated Renewables Strategy to Meet U.S. Demand



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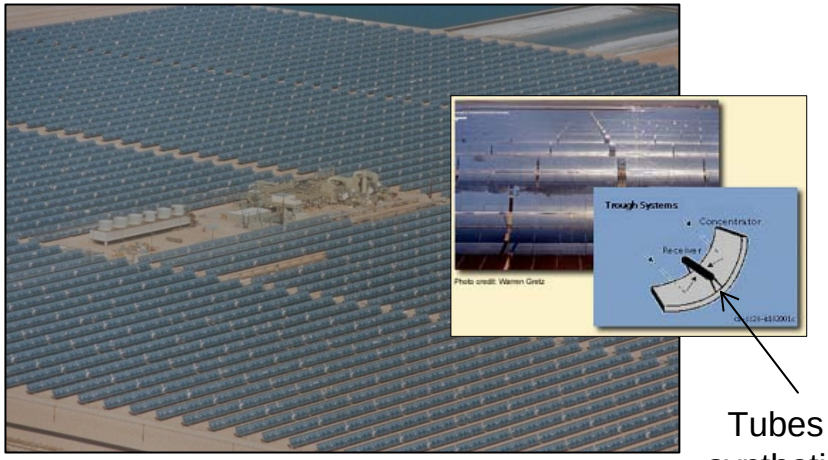
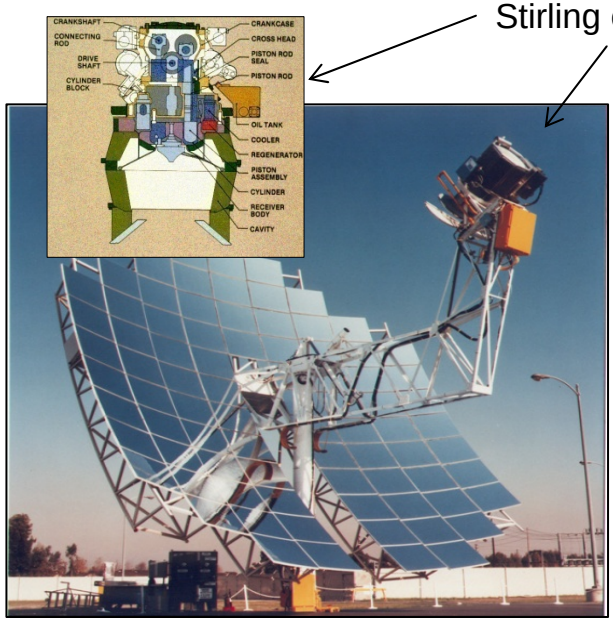
Principal Solar Thermal Technologies



Tubes w/ synthetic oil

Solar Parabolic Trough



Stirling engine

Stirling Solar Dish

$7m^2$ heliostats

Tower and Boiler

Luz Power Tower (LPT)

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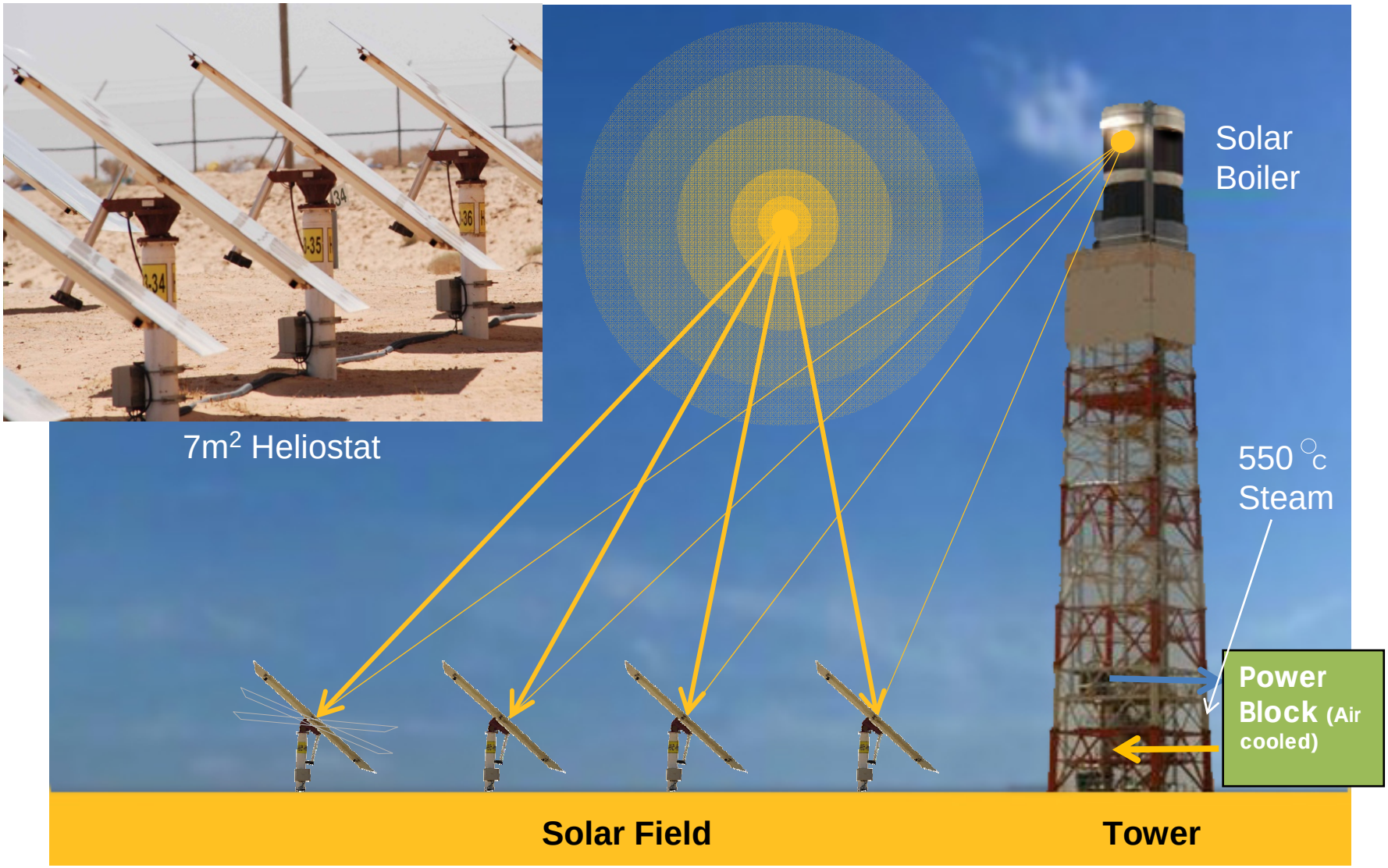
Luz Power Towers (LPT 550)



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Technology & Design Philosophy

- Compete with conventional power production
- Reach higher solar to thermal and thermal to electricity efficiencies
- Follow global technology trends to minimize costs: use standard available materials; leverage modern computer design & control technologies; minimization of concrete/steel used in construction

BrightSource Solution – LPT 550

- Proven Technology
- Direct Solar-to-Steam
- Higher Temp. – 550^0 C
- Lower Capital Cost
- Low Parasitic Load
- Higher Operating Efficiency
- Uses Commodity Materials:
  - Flat Glass
  - Minimum Concrete
  - Minimum Steel
- Air Cooled Power Block

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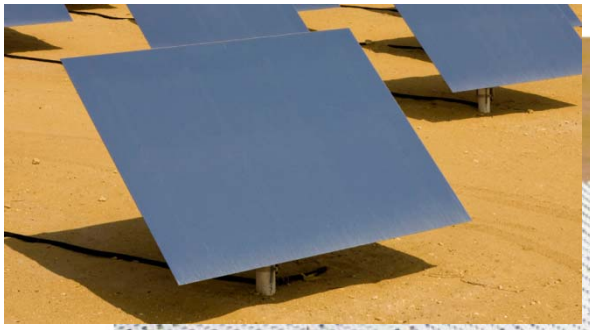
LPT Plant Components



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Advantages of LPT Technology

- Greater thermal efficiency
  - Ability to track the sun on two axes rather than one
  - Elimination of heat transfer fluid as an intermediate step
- Greater electrical efficiency
  - Higher concentration ratio (>400x vs. 30x for trough) enables production of higher temperature steam
  - Higher temperature steam results in higher turbine efficiency
- Lower parasitic losses
  - Less than 1/10th as much piping vs. trough
  - Piping of steam vs. piping of viscous heat transfer fluid

Advantages of LPT Technology

- Lower capital costs
  - Flat mirrors are cheaper than curved mirrors
  - Small profile heliostats require less strength/steel to resist wind than large troughs
- More site flexibility
  - Towers can be built on land with >5% slope (N-S or E-W); troughs require <½% N-S and <3% E-W slopes
- Greater natural resource efficiency
  - Dry cooling vs. wet cooling uses 1/10th the water

Performance Comparison: LPT vs. Troughs

Factor	SEGS VI (Trough)	Optimum Trough	LPT 550	LPT 650 *
Temperature (^{0}C)	370^0	400^0	550^0	650^0
Solar to Thermal Efficiency	35%	40%	50%	50%
Gross Thermal to Electrical Efficiency	37%	39%	43%	46%
Parasitic Power	14%	12%	5%	6%
Solar to Electrical Efficiency	11%	14%	20%	22%
Relative Cost Per kWh	**100%**	**90%**	**70%**	**63%**

** Future version of LPT 550, operating at 650^0 C*

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SEDC Demonstration Facility

- Location: Negev Desert, Israel
- In operation since June 2008
- Heliostats Reflecting Area: ~ 12,000m^2
- Number of Heliostats: ~1600
- Heliostat Dimensions: 2.25m x 3.2m
- Reflecting area per Heliostat: 7.2m^2
- Distance between rows of Heliostats: 4.2m – 10m
- Tower Height: 60m (+ 15m Receiver)
- Thermal Energy on receiver: 6 MWth

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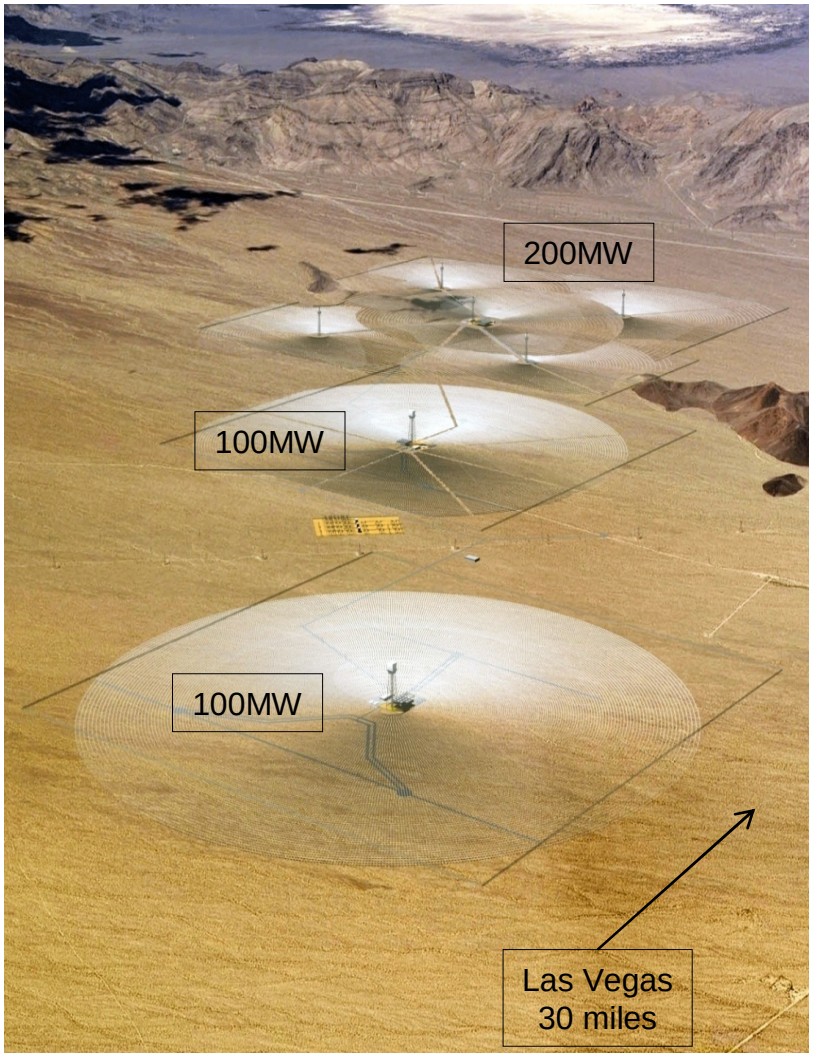
BrightSource's Announced Development Sites

SITE	ACRES	MW	Status
Ivanpah, CA	3,900	400	CAISO 2nd of 3 step process completed; Awaiting CEC Preliminary Staff Assessment; applied to BLM for Right of Way
Broadwell Lake, CA	10,000	800	CAISO 2nd step completed: 3rd step for detailed cost estimate underway; BLM SF 299 filed
Siberia, CA	16,000	400	CAISO – waiting for 2nd step to be completed – expected by end of year; BLM SF 299 filed
Mormon Mesa, NV	15,000	2,000	Nevada Power completed feasibility studies; Next step being initiated; BLM SF2 299 filed
Mesquite Valley, CA	17,000	600	Studying requirements Site recommended by BLM
GRAND TOTALS	**61,900**	**4,200**	
Confidential	60	N/A	Solar-to-steam Demo Plant

Ivanpah Solar Power Complex – 400 MW Site

- 300MW PG&E PPA in place
- 100MW in advanced negotiations
- 123MW Siemens turbine purchased
- CEC and BLM permitting scheduled approval for Nov 2009
- Accessible Transmission
- Initial construction scheduled for late 2009
- 1st Plant COD scheduled for late 2011
- EPC and Boiler contracts under negotiations



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BrightSource Energy Advantage

- **Superior solar technology:**
  - Based on proven power tower approach
  - Lower cost and higher efficiency than competing solar technologies
- **Strong management team:**
  - Includes all of the key senior managers of Luz International, which designed and built more than 350 MW of solar thermal plants built in the 1980's
  - World class project development team with over 20GW of power projects developed, constructed, and managed
- **Solid financial backing:**
  - Over $160M in corporate financing from key financial and strategic investors including: VantagePoint Venture Partners, Morgan Stanley, Black River, Draper Fisher Jurvetson, DBL Investors (a spin-off from JP Morgan), Google, BP Alternative Energy, StatoilHydro Ventures, Chevron Technology Ventures, and others
  - Non-recourse credit line for funding project and site development activities
- **Advanced business activities:**
  - Solar Energy Development Center operational in Israel
  - Signed largest solar power contract ever made – 900MW with Pacific Gas & Electric
  - In detailed negotiations with other major utilities for additional PPAs
  - Actively developing sites for more than 4GW of solar thermal generating capacity
  - First project, Ivanpah 400MW Solar Power Complex, is well advanced with construction scheduled to start in 2009

1999 Harrison St.
Suite 2150
Oakland, CA 94602
(510) 550-8165