

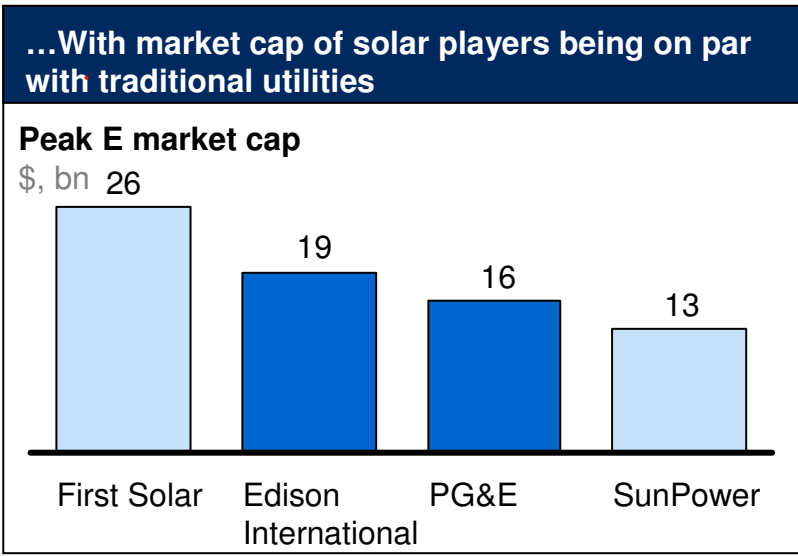
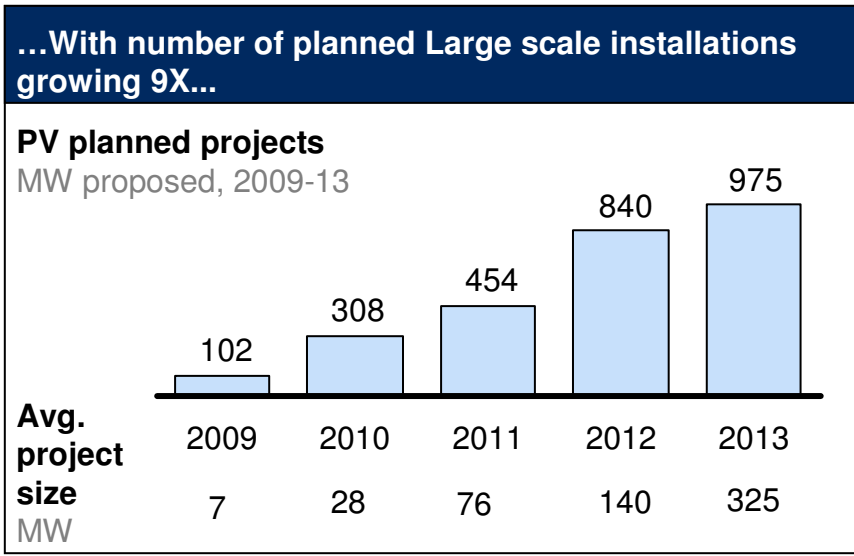
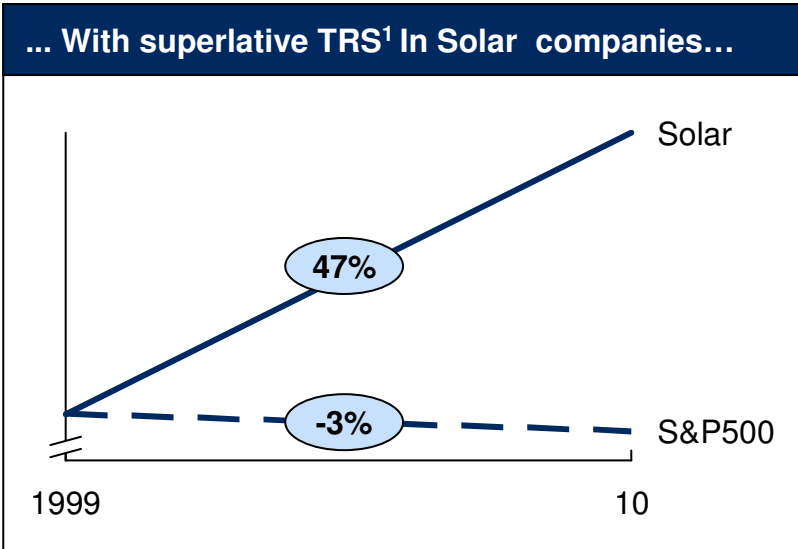
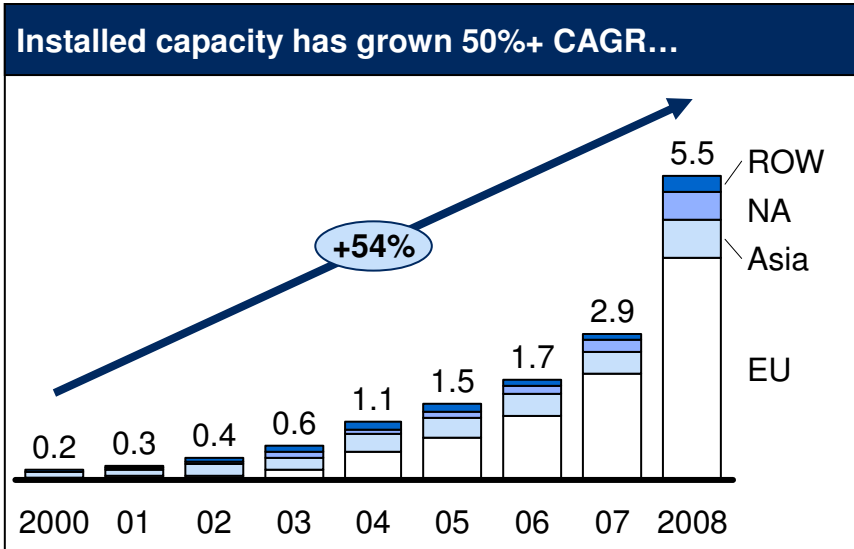
Solar at Crossroads... Why? Now What? How to influence the future?

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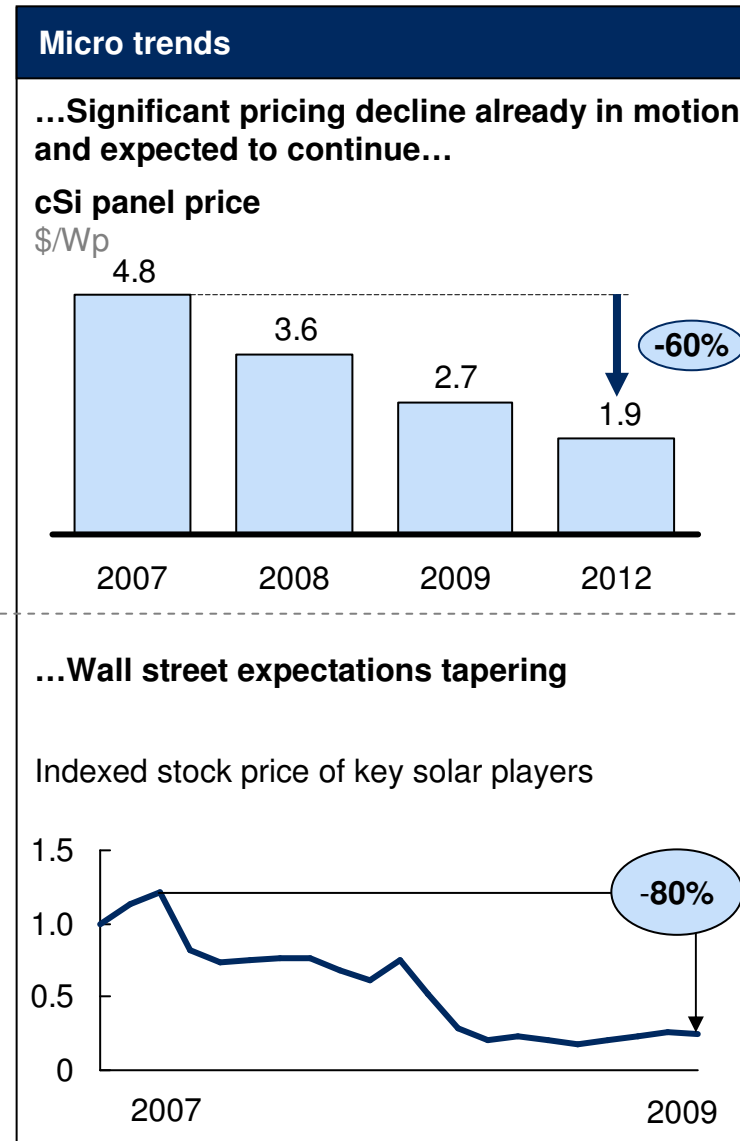
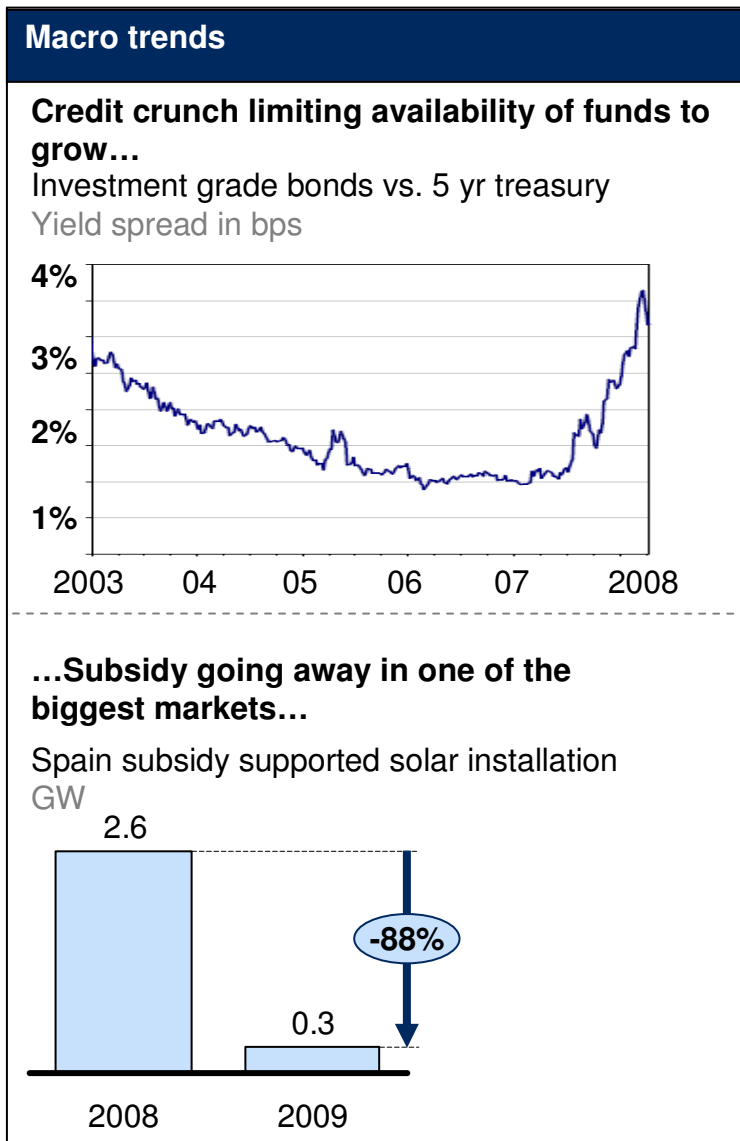
By any metric, Solar/PV has seen phenomenal growth in past years



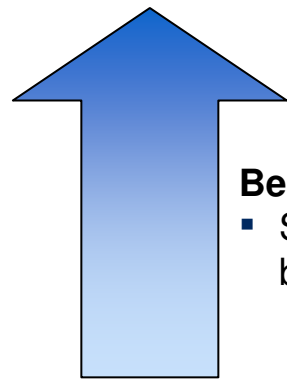
1 TRS measured from Top 5 solar companies by market cap

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However Solar is at cross roads due to confluence of macro and micro economic reasons

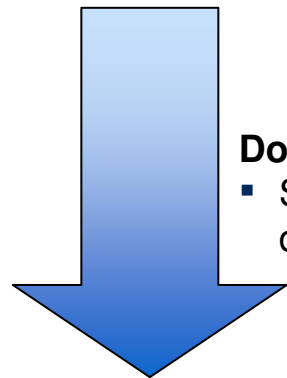


Now what? ...Future course depends on various market and individualistic factors



Best case scenario

- Solar continues blistering growth



Down case scenario

- Solar growth slows down

Needed catalysts

PV demand needs to stay strong

- Continued rise in energy costs (e.g., carbon tax)

Ground breaking technology

- Next generation higher efficiency solar cell designs
- Ultra low cost solar solutions

Strong incentives and higher interest in renewable energy

- Feed-in-tariffs and other forms of broad incentives
- Interest from larger players in construction, retail, etc.

Disciplined cost reduction and stable pricing

- Rapid installed system cost reduction beyond \$1/W
- Attractive margin within the solar value chain

Rapid growth in other alternative energy technology

- Wind continues to accelerate cost reduction

Slowdown in solar innovation

- Gains in solar efficiencies and cell technology stalls

Irrational price competition leading to lower ASP

- Unattractive industry margins due to competition

Lower energy costs due to oil/gas price drop

- Overall interest in renewable energy fades due to lower oil/gas price

There are 3 key levers to influence the future positively

1

Prove Solar is ready for prime time

- Large scale solar roll-out in utilities (e.g., 20MW+ in both distributed/central facilities – not just contracts but in the ground installation)
- Reliability/energy density concerns addressed (e.g., 1~2MWs on commercial rooftops)

2

Ensure/create strong profitable demand

- Generate end use demand, in an economical, non-fragmented way (e.g., commercial/utility scale installations vs. residential)
- Disruptive business models & relaxing of electricity sales restrictions to promote healthy growth (e.g., feed-in-tariffs, over-the-fence rule)

3

“Step change” Improvement in operations

- Reach grid parity even without government subsidies (i.e. vs. peak commercial price)
- Accelerating cost reduction leading to competitive ASP against other means of energy & attractive margins (e.g., going beyond \$1/Wp)

Additional information

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