

Low Iron Glass Concentrated Solar Power (CSP) Market Shares, Strategies, and Forecasts, Worldwide, 2014-2020

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Abstracts

WinterGreen Research announces that it has published a new study Low Iron Solar Glass Concentrated Solar Power (CSP) Market Shares, Strategy, and Forecasts, Worldwide, 2014 to 2020. The 2014 study has 565 pages, 303 tables and figures. Worldwide markets for Low Iron Glass for Concentrating Solar Power (CSP) are poised to achieve significant growth based on an expectation of rapid adoption of CSP worldwide. As soon as a market has 100 paying reference accounts, it becomes a viable market. CSP solar systems have reached that market inflection point.

Growth potential of the CSP sector is strong, part of the solar growth that is poised to make solar energy represent 90% of the world's energy production within 25 years. Just as smart phones grew rapidly once the price points were affordable and the economies of scale large enough to drive down prices for the markets to achieve significant growth, so also solar markets will take off. CSP has a strong ability to reduce the cost of electricity produced. Compound annual growth rates are expected to be made meaningless by penetration analysis when the markets grow rapidly.

There are no hindrances to CSP growth except technology and the new nanotechnologies make solar processes possible. The materials are simple, silica, silica, and more silica. With solar energy available to support the CSP low iron glass and the CSP module manufacturing processes, the markets will grow at compound rates.

Costs of electricity from CSP plants at US \$ 0.15-0.24/kWh will decline to \$.03 and lower by 2017 as the effect of the 35 year life span of the plant is factored into cost analysis. Once the plant is built very little labor is necessary, there are no ongoing fuel



costs. This is a compelling economic story.

By 2020, expectations are that CSP capital costs will decline even further by between 30% and 50%. New technology will make plant operations even more efficient by that time.

According to Susan Eustis, the lead author of the team that created the study, "Concentrating Solar Power (CSP) depends on low iron glass because the low iron glass is clear and creates increased efficiency in the capture of solar power. Low ion glass is proving to be of value because it drives the market for CSP. CSP has been further proven in newly operational installations, including Ivanpah."

Concentrating Solar Power (CSP) has moved from the trial stage to the early adopter stage. With the Ivanpah solar electric generating system on line, the ability to offer steam generated electricity from the sun is compelling. There are significant advantages to using existing steam generator technologies with renewable energy to power the steam generator. Ivanpah CSP is positioned to strengthen the US economy and solar supply chain, shifting toward energy independence.

Ivanpah solar electric generating system shows a path to future energy generation. It is anticipated that solar electricity will eventually reach both peak and off-peak grid parity in all locations, becoming the energy source of choice for everyone. The world changes dramatically when solar power becomes ubiquitous and cheap. We can desalinate water, we can drive electric cars, we can keep our homes as warm or as cool as we want them to be year around.

Low iron glass CSP represents 3% of the world glass production. Markets at \$355 million in 2013 are expected to reach \$11.3 billion by 2020. Growth is expected to achieve 15% of total low iron glass at glass production in 2020, i.e. the same level as automotive glass.

Companies Profiled

Market Leaders

Rioglass

Schott - Receivers



eSolar

Guardian

ACWA Holding / SUN & LIFE / Flabeg

Market Participants

Almeco Solar

China Glass Holdings

Dubai Investments PJSC

Guangdong Golden Glass Technologies

Guangfeng Solarglass (Hong Kong)

Gujarat Borosil Ltd. (GBL)

Hangzhou AMD PV Glass

Hecker Glastechnik

Interfloat

Jinjing Group

Nippon Sheet Glass NSG Group

Oerlikon Solar

Pilkington

ReflecTech

Saint Gobain Solar SG



Sener

Shandong Glass Group

Shanghai Flat Glass Co Ltd

Siemens Concentrated Solar Power, Ltd

Sisecam Group

Succeed Glass Co., Ltd / Henan Succeed New Energy

Sunarc Technology

SunRun and U.S. Bancorp

Targray

Targray Solar

Tata BP Solar

Trakya Cam Sanayii A.S

US Silica

Zhejiang Flat Glass Co., Ltd

Check Out These Key Topics

Low Iron Glass

Concentrating Solar Power (CSP)

Nano Silver Coating

Mirror Durability



Reflectivity

Polyvinyl butyral (PVB)

Silver Coatings

CSP Low Iron Solar Glass

Clear Float Glass

Mirror Quality on Plant Performance

Ivanpah

Receiver Mirrors

Heliostats

Low Iron Silica

Low-Iron Float Lines

Low Iron Silica Removal Processes

Float Glass Cost Structure

50 MW CSP Plant

Sensors Based On Magnetic Materials

Economies of Scale

Powering Current Sensors



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