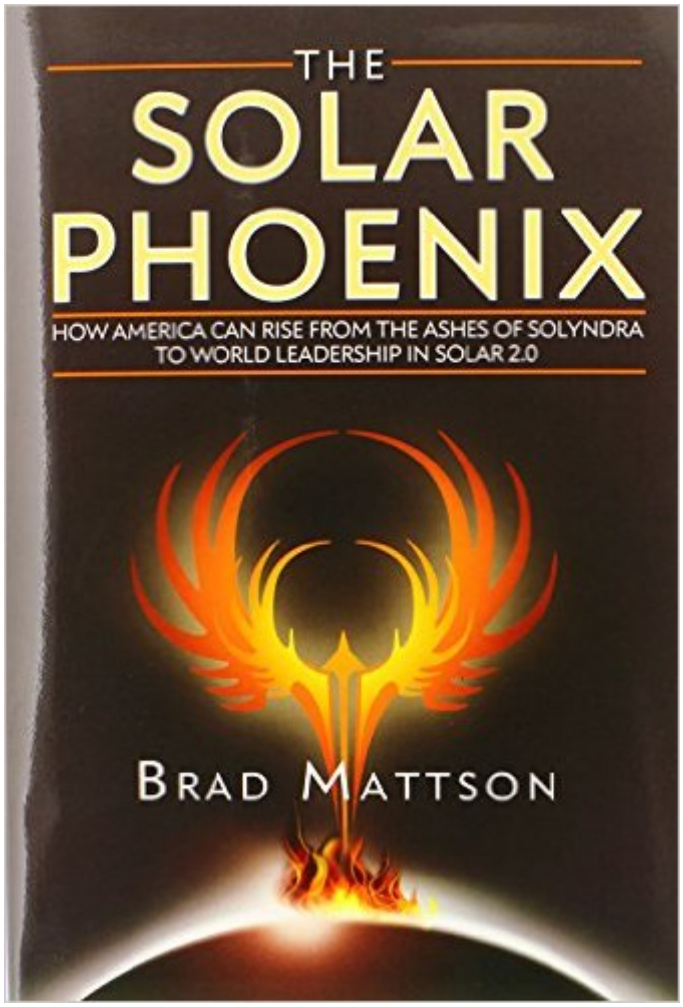
The Solar Phoenix



Synopsis

The Solar Phoenix: How America Can Rise from the Ashes of Solyndra to World Leadership in Solar 2.0 explains why solar is fundamental to the worldâ ™s energy future, and how the industry has passed a cost tipping point. It provides a set of detailed roadmaps of how, when and where the solar energy revolution will take place. And it challenges the United States to take its rightful place as the worldâ ™s solar superpower. America was the pioneer of Solar 1.0. Now it must lead in the Solar 2.0 era. I love this book. Everyone should understand the need for distributed generation and that solar is the key to its happening. For energy security and energy independence, we really have no choice. It is only a matter of time before everyone gets it. Brad gets it. â ”R. James Woolsey, former Director C.I.A. Solar Phoenix not only makes the case for solar, but outlines a path to deployment at scale. This is not just a â œblue sky, tree-huggingâ • story, but a detailed roadmap for success, connecting the dots on how America, or any country, can create climate wealth. â ”Jigar Shah, author, solar and climate expert Bradâ ™s chapter â œInvestment Roadmapâ • provides a thoughtful and compelling argument about how, when and where to invest in solar. Solyndra made headlines when it failed, but the headline for solar when all is said and done will be a story of investors doing very well by doing good. As the book clearly explains, the Solar Phoenix is set to rise. â ”Nancy Pfund, DBL Investors, Investors in Tesla and SolarCity About the author: Brad Mattson is a pioneer. After taking both Novellus and Mattson Technology from his garage to NASDAQ, Brad retired from the semiconductor industry and became involved with social entrepreneurship, pursuing the goal of â œtechnology benefitting humanity.â • During that pursuit, he fell in love with solar. Mentoring entrepreneurs in Africa, India and Central America, he saw firsthand how energy could positively change lives, and how the lack of energy access was at the core of persistent poverty. And he wanted to do something about it. Brad became the solar partner at a prestigious venture capital firm, VantagePoint Capital Partners, working to bring solar to the cost point that would unlock the market. Eventually he returned to the CEO chair, leading the Siva Power team as they take solar to the next level and make clean, affordable energy available to everyone, everywhere. Brad lives with his wife Vicky in Silicon Valley, California.

Book Information

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Customer Reviews

This is a powerful book. It’s structured as introductory material with chapters such as "Solar Economics 101" and "The History of Solar," followed by a series of 8 roadmaps: Technology, Efficiency, Manufacturing/Cost, Product, Business Model, Investment, Policy, and Public Support. This is a large scope, ranging from technical properties of competing solar cell architectures, to what it will take to generate enough public support to move beyond our partisan political gridlock. The glossary, list of acronyms, footnotes and references, along with Mattson’s great clarity of writing make this both an excellent introductory book on solar accessible to everyone, and a resource for those of us in the business. Very impressive.The many illustrations, almost all in color, make the price a little higher than optimal for the very large audience this book deserves. For me, it is absolutely worth it.

The first paragraph of Solar Phoenix describes how the life circumstances of the poor in off-grid communities are transformed by access to affordable clean energy. From these humble corners of the world, the author embarks on a tour de force to illustrate how solar energy has advanced from 1.0 when large scale diffusion was technologically plausible, to 2.0--when it has become feasible and planable as a widely deployable alternative to centralized nonrenewable energy. This book is both a technological and economic primer on the future potential of distributed solar energy. The roadmap that the author develops takes into account technology learning curves as well as advances in manufacturing, product development trajectories, the emergence of potentially disruptive business models and investment prospects, as well as public policy considerations. Brad Mattson has provided a wide angle view of an ecosystem that seems poised for growth and full of promise for a more sustainable energy future. The evidence of this future may be unevenly distributed and there will be lagging elements In the innovation ecosystem that he describes. The

noted technology historian, Thomas Hughes, referred to these lagging elements as "reverse salients." One by one, the history of technology posits that these choke points will yield to the creative imaginations of innovators, entrepreneurs, and political will.

A sign of intelligence is to learn from past mistakes. Think energy independence/security... Have we forgotten the lesson from the 1970s? Are we willing to depend on PV modules from China, Taiwan, Malaysia or the Philippines rather than investing in a domestic PV module and inverter manufacturing industry?Yes, we may not be able to compete on standard c-Si technology, but the U.S. has long been the leader in developing a far less capital intensive, next generation technology based on the thin film materials CIGS and CdTe. The latter has been successful due to a few fortunate events - e.g. the right visionary benefactors early on. The former has thus far not lived up to its potential. But there are a number of reasons why - pursuing non-viable approaches that haven't worked in the lab such as flexible substrates, nano-particles, electrodeposition or costly cylindrical substrates. Now that the mistakes are known one would think that the promise CIGS holds can be capitalized upon. CIGS is the only thin film PV material with a demonstrated efficiency above multi crystalline Si.The U.S. has a once in a lifetime opportunity to leap ahead. Are we willing to pass it by or show true vision and leadership? Brad's book provides critical background and insights to all those who believe in the capabilities of the United States and want to maintain our technological leadership as well as domestic manufacturing jobs.

Power: How to Build Solar PV Energy Systems for Stand Alone LED Lighting, Cameras, Electronics, Communication, and Remote Site Home Power Systems Top 40 Costly Mistakes Solar Newbies Make: Your Smart Guide to Solar Powered Home and Business EnergÃ- a Solar FV Fuera de Red: CÃ mo Construir Sistemas de EnergÃ- a Solar FV para Sistemas de Potencias Aislados de IluminaciÃ n LED, CÃ¡maras, ElectrÃ nica, ... en Sitios Remotos (Spanish Edition) How To Build A Solar Panel And Solar Power System, Second Edition How To Build a Solar Wind Turbine: Solar Powered Wind Turbine Plans Solar PV Powered UV Water Treatment: How to Solar Power UV Water Sterilizing Systems for Drinking Water Onsite EnergÃ- a solar en casa y jardÃ- n / Solar energy at home and garden (Spanish Edition) Tratamiento Solar FV de Agua (Spanish Edition): CÃ mo Energizar Sistemas de EsterilizaciÃ n de Agua con EnergÃ- a Solar FV para Agua Potable In Situ EnergÃ- a solar: la energÃ- a solar para los simulado: los paneles solares: Todo lo que necesita saber (Spanish Edition) Prince Eugen of Savoy (Phoenix Press) Wings on My Sleeve (Phoenix Press)