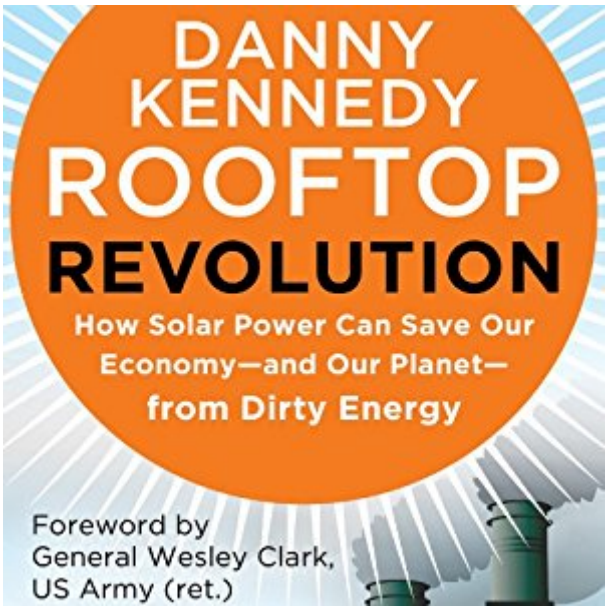
Rooftop Revolution: How Solar Power Can Save Our Economy-and Our Planet-from Dirty Energy



Synopsis

The Biggest Untold Economic Story of Our TimeHere is the truth that the powerful Dirty Energy public relations machine doesn’t want you to know: the ascent of solar energy is upon us. The production of solar-generated electricity has risen exponentially in the last few years, and employment in the solar industry has doubled since 2009. Meanwhile, electricity from coal has declined to pre-World War II levels as the fossil fuel industry continues to shed jobs.Danny Kennedy systematically refutes the lies spread by solar’s opponents-that it is expensive, inefficient, and unreliable; that it is kept alive only by subsidies; that it can’t be scaled; and many other untruths. He shows that we need a rooftop revolution to break the entrenched power of the coal, oil, nuclear, and gas industries. Solar energy can create more jobs, return our nation to prosperity, and ensure the sustainability and safety of our planet. Now is the time to move away from the dangerous energy sources of the past and unleash the amazing potential of the sun.

Book Information

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Customer Reviews

The first half of the book is easily read, interesting, and relavant with social-awareness, but it sinks into an infomercial afterwards. I’m implementing solar power fully, not just electrical power and this book only addresses electrical. I’ll probably install solar hot water first because it has a lower capital cost and overall better rate of return than solar electrical. I read what was interesting and passed it along to a friend.

The basic facts are clear. The US must move to solar and other forms of renewable energy to slow down global warming; lower the environmental costs of extracting coal, oil, and natural gas; reduce the adverse public health impact of fossil fuel emissions; and end our dependency on overseas sources of petroleum.But did you know that the move to solar energy is inevitable? That, sooner or later, the economic advantages of solar will be so compelling that the relatively few people today who still believe the coal and oil industries' propaganda will eventually be forced to decide to install photovoltaic panels on their rooftops and commercial buildings?That's the message that emerges from reading between the lines of Rooftop Revolution, the paean to solar energy by Danny Kennedy, one of the avatars of the rising solar industry. Kennedy demonstrates with a wealth of statistics and a captivating narrative that the price of solar electricity from rooftop installations is on such a steep downward track, the pace of technological innovation in the industry is so swift, and the price of oil is on such an inevitable long-term rising trend, that within a very few years it will become impossible to ignore the widening gap in cost between electricity from solar and that from fossil-fuel generating plants -- a gap in favor of solar.Not so incidentally, Kennedy reports, "the tide turned in 2010 when fully half of new electric generation coming online globally was renewable. In the United States, renewables were 25 percent of new electric generation." And "going solar by 2015 will be economically rational for two-thirds of the households in the United States."However, Kennedy makes it clear that he isn't satisfied to let history run its course. The urgent need to lower global warming, and the potential of solar energy to create millions of desperately needed new jobs, together force him to advocate for public support to urge changes in state and federal energy policy.In Rooftop Revolution, Kennedy makes a powerful case for the adoption of solar on the basis of its job-creating power alone: the solar energy industry hires roughly twice as many people as the fossil fuel business per dollar invested. And the total number of jobs in the solar industry is growing at a ferocious pace while employment in the fossil fuel sector is shrinking.As the author makes clear, a sensible federal policy of incentives to promote solar and not to encourage the use of fossil fuels could greatly speed up the move to solar energy. However, the powers that be in Washington DC have decided otherwise. Despite all the cries of foul from the US Chamber of Commerce and the oil industry that the government is giving away the store to the solar industry -- they point to Solyndra as "proof" -- the facts tell us a much different story. In fact, the oil, coal, and natural gas industry has received federal subsidies in the last decade that are more than an order of magnitude greater than those granted to renewables (about 10 times for nuclear, 11 times for natural gas and petroleum, and 22 times for coal!).About that Solyndra case, by the way: the company was the only

one of more than 40 firms that received loans under the same program and proceeded to fail, and the loan program had already set aside more than five times the loss from Solyndra as a reserve against bad loans.Kennedy quotes Jeremy Rifkin's assertion that "The great economic revolutions in history occur when new communications technologies converge with new energy systems." This statement, which encapsulates the thesis of Rifkin's 2011 book, The Third Industrial Revolution (reviewed here), meshes with Kennedy's thinking in his description of the changing character of the electricity market. As the number of solar-equipped buildings on the grid increases, the role of the power companies will start to shift, employing them as brokers of a sort, managing the flow of the surplus electricity to fill in gaps elsewhere on the grid. However, Rifkin envisions this becoming the predominant or sole role of the power companies by mid-century; if Kennedy believes that, he doesn't indicate so in Rooftop Revolution. Instead, he dwells on the technical challenges facing the industry to incorporate surplus solar energy amounting to even less than half the total power in the system. The technology to accomplish that is almost market-ready, Kennedy points out, but it's not there yet.Rooftop Revolution offers an appealing overview of the present and prospects for solar energy, written in an engaging conversational style and brought to life by the author's autobiographical asides and his brief profiles of a number of the leading lights in bringing the power of the sun to life on Earth.Danny Kennedy is a co-founder and Executive Vice President of Sungevity, a fast-growing firm in Oakland, California, that installs custom-fitted residential solar systems around the US and now in The Netherlands as well. Kennedy was a campaign manager for Greenpeace for many years before launching Sungevity and is widely considered a leading authority on global energy issues.

Pasted from Lenz Blog, hyperlinks working there removed here:I just bought the Kindle version of Danny Kennedy, Rooftop Revolution, How Solar Power Can Save Our Economy - and our Planet - from Dirty Energy. I found this over Twitter. Someone retweeted this from the book's twitter feed:"#Fact: 1,000 sq miles of solar would power the whole USA. The oil & gas industries use 10x that. pic.twitter.com/DHvmJWnQ @bruneski"I enjoyed reading this book. The author is clearly enthusiastic about the subject, and knows a lot. I learned several new facts.One interesting point he makes: Fossil fuel is also solar energy, though used in a "laughably inefficient way". I agree with that assessment. The inefficiency is masked by the fact that humanity is using the resources stored in millions of years in one year. But if anybody tried to produce fossil fuel from scratch the way nature has been doing it for us, they would quickly learn that waiting hundred of millions of years for your vast forests to be converted does not make a convincing business model.I liked the chapter

about leading and inspiring people in the field of solar, some of whom I already had noticed. But not all of them. I would recommend including some information on Masayoshi Son in the next edition.In that chapter, I was especially interested in hearing about Solarmosaic. They are in the process of setting up an interesting crowdsourcing model for solar projects. Their website says they are now working with the Securities and Exchange commission on their business model.I already noted the interesting fact that 10 percent of the land used by the fossil fuel companies would be enough to generate all of the electricity for the United States (the object of the tweet above). I didn't know that.I didn't know that the IEA expects 12,000 GW of solar PV capacity in 2060. However, Kennedy writes that present installed capacity is around 50 GW world wide, which is not correct now. Maybe he wrote that part of the manuscript earlier, when it was about right. Capacity was already 67,4 GW at the end of 2011, with total world wide production of about 80 TWh in that year.I learned that Hawaii still generates more than 90 percent of its electricity from oil, which makes it an easy target to get blown out of the water by the competition from solar.I learned that solar has grown faster than the Internet since 1992, with 30,000 percent to 29,000 percent. That's not bad as a record.I didn't find many typos either. One is in the first sentence about Sven Teske, where it says "is German friend", with the "a" missing, another at location 1806 where it says "polices" instead of "policies".At location 350 Kennedy writes that Germany now gets a whopping 20 percent of its power from clean, sustainable energy. Actually, it is already 25% for the first six months of 2012.Kennedy has founded a company, Sungevity, that is trying to get solar panels cheaper and with less hassle to American costumers. I recall blogging about the still high costs of American solar compared to Germany."The biggest chunk comes from costs of the supply chain. American costumers pay about as much for that as for the solar panels. In contrast, the supply chain costs are almost invisible in Germany.That of course means a big chance for someone to reduce these costs. I hear the Americans have access to the Internet and a large pool of very talented people interested in setting up a business. Why can't someone get those solar panels delivered at about 20% of the present lavish cut the supply chain is getting?"From what I understand from reading the book, Sungevity is trying to do exactly that.What I found missing was a discussion of the new antidumping tariffs for Chinese solar panels, a question not without impact on the United States solar market.Anyway, I think this is required reading for anybody interested in energy issues, and in solar in particular.flag

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