



## COMMON READING DISCUSSION GUIDE

### *Taming the Sun: Innovations to Harness Solar Energy and Power the Planet*

Class of 2024

1. In his preface, Sivaram—a physicist and the Chief Technology Officer of a large renewable energy firm—states that he writes for “a broad audience” including students, scientists, executives, investors, and policymakers (xvi). Does *Taming the Sun* address this broad audience effectively? Or does it seem most effectively targeted to a subset of these readers? Does Sivaram seem to be addressing primarily an American audience, or a global one? Is he addressing readers who already believe in the global significance of climate change, or readers who remain skeptical of climate change science?
2. In Chapter 1, Sivaram lays out two possible futures. In first scenario, the world fails to slow the “runaway train” of climate change—with devastating natural, economic, and human consequences (6). In the second, a global commitment to clean energy slows the rate of climate change and promises a more hopeful future. After reading the book, how optimistic do you feel about our collective ability to achieve this second future? Do you believe, as Sivaram does, that this second future remains within reach?
3. Sivaram argues that three kinds of innovation are necessary to foster the development of solar energy: financial innovation, technological innovation, and systemic innovation (see Box 3.1 on page 58 for helpful definitions of all three). What key changes does he argue are necessary in each of these areas? What are the primary obstacles—economic, scientific, political, financial—to these changes? Does Sivaram present reasonable recommendations for how to overcome these obstacles?
4. As Sivaram points out, technology innovation requires upfront financial investment—yet such investment might not produce tangible results until years later. “This priority will not be met by reacting to needs in real time,” he observes. “Rather, it will take long-term planning” (191). What challenges are associated with prioritizing immediate investment in the name of long-term outcomes? Is Sivaram successful in bringing a sense of immediacy and urgency to these investments in the future?
5. In Chapter 9, Sivaram warns that there is “no silver bullet” for solar energy storage (221). He urges readers not to focus exclusively on one “flashy” solution—in this case, Elon Musk’s lithium-ion batteries—at the expense of other possibilities (247). Can you think of examples from other fields or industries, wherein the implementation of “silver bullet” solutions proved inadequate? How would you avoid this common pitfall in the case of solar energy development? What strategies would you use to convince investors, policymakers, and others to support less “flashy” ideas with significant potential?



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6. Ultimately, Sivaram's vision depends on collaborative efforts not only between industries but also between nations. In Chapter 8, for example, he explores the possibility of capturing solar energy through hybrid grid models that cross national boundaries. In your opinion, how well does *Taming the Sun* capture the tension between international competition and international collaboration—economic, political, scientific—in the pursuit of solar energy innovation? How persuasive—and how feasible—are his arguments for international collaboration? Would he convince readers who do not already agree with him? Why or why not?
7. The book's conclusion, written in 2017, proposes that the United States has the potential to become a global leader in solar energy innovation—but only if federal and state policymakers commit to fostering such innovation. In particular, Sivaram urges the Trump administration to reexamine its priorities and commit to energy innovation. What is it like to read this conclusion in 2020? What is your reaction to Sivaram's vision of US leadership on the international stage?
8. *Taming the Sun* is an interdisciplinary text, one that draws on a range of perspectives in finance, science, public policy, technology development, and more. What is the value of this interdisciplinary approach to writing about climate change? What does Sivaram accomplish here, that a climate change book focused on a single discipline—a scientific or economic or historical account—could not? Are there limitations to what this book can accomplish? What kinds of arguments is Sivaram most and least equipped to rebut?
9. Relatedly, are there audiences whom you feel would be less convinced by Sivaram's arguments than others? If so, is there another kind of book that these audiences would find more convincing?
10. Would you recommend *Taming the Sun* to other readers—friends, relatives, classmates? Why or why not?