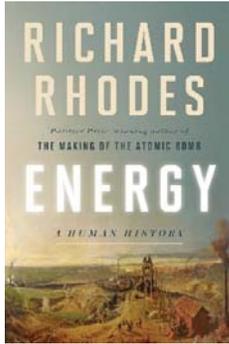


***Energy: A Human History* by Richard Rhodes, Simon & Schuster, 2018, 480 pages, ISBN: 978-1-5011-0535-7.**



Richard Rhodes's *Energy* is a must-read. Although the title is tad misleading—it is by no means a comprehensive history of the relationship between energy and humanity—*Energy* is a delightful take on the modern history of that relationship.

After a brief foreword that addresses climate change and its complicated connections to humanity's relationship with energy (and reveals that chemists have known automobile pollution causes Los Angeles' smog problem for 70 years), Rhodes dives right in.

He starts with a particularly interesting anecdote about William Shakespeare and his theater partners, the Burbage brothers. In winter 1598, the men deconstructed the Globe theater and moved it, piece by piece, across the Thames. What does this have to do with energy?

Shakespeare and the Burbage brothers had to disassemble their original theater and rebuild it because, in Elizabethan England, wood was a scarce resource—not because of a lack of trees per se but because so many aspects of the society depended on it. Buildings were all made from wood. The country's massive armada warships were made from wood. Wood burned in all the fires that kept England warm in the winter. That is, until the British turned to coal.

The rest as they say, is history. Humanity's love affair with coal is one that has continued to this day—and coal's higher efficiency as a burning fuel led to further innovation—like steam engines in boats and trains.

No history of energy is complete without a discussion of electricity (for a more comprehensive history of electricity, try Craig R. Roach's *Simply Electrifying*).

Rhodes gives a fair bit of "screen time" to Thomas Edison, who was a proponent of direct current (DC)—and very little to Nikola Tesla (a single mention on page 200). Tesla developed an alternating current induction motor for Westinghouse Electric Company that contributed to Westinghouse winning the so-called "War of the Electric Currents" against the Edison Electric Light Company.

"That story has been told in great detail elsewhere," Rhodes explains, "somewhat exaggerating the role of the inventive Serbian engineer Nikola Tesla, whose only important contribution to the 'war' was the alternating-current electric motor." Tesla may have only made a single important contribution to that 'war'—but it was certainly a winning one.

But wood, coal, and electricity are hardly the only energy sources Rhodes explores. Bird droppings, whale oil, alcohol, petroleum, and nuclear energy all have their story told.

Rhodes' narrative style—presenting seemingly non-sequitur anecdotes to demonstrate a critical facet of modern humanity's relationship with energy, and then filling in the subsequent gaps with detailed but well-crafted history lessons—makes reading *Energy* not feel like reading a history book.

Unlike many books that have a color photo insert in the middle, with high resolution images printed on higher quality paper, *Energy's* illustrations are scattered throughout the text. Given how many of the concepts require visualization, or are significantly aided by it, having those illustrations in close proximity to the text that refers to them is refreshing and makes for a more pleasant reading experience.

*Review by Jeanette S. Ferrara, MA*