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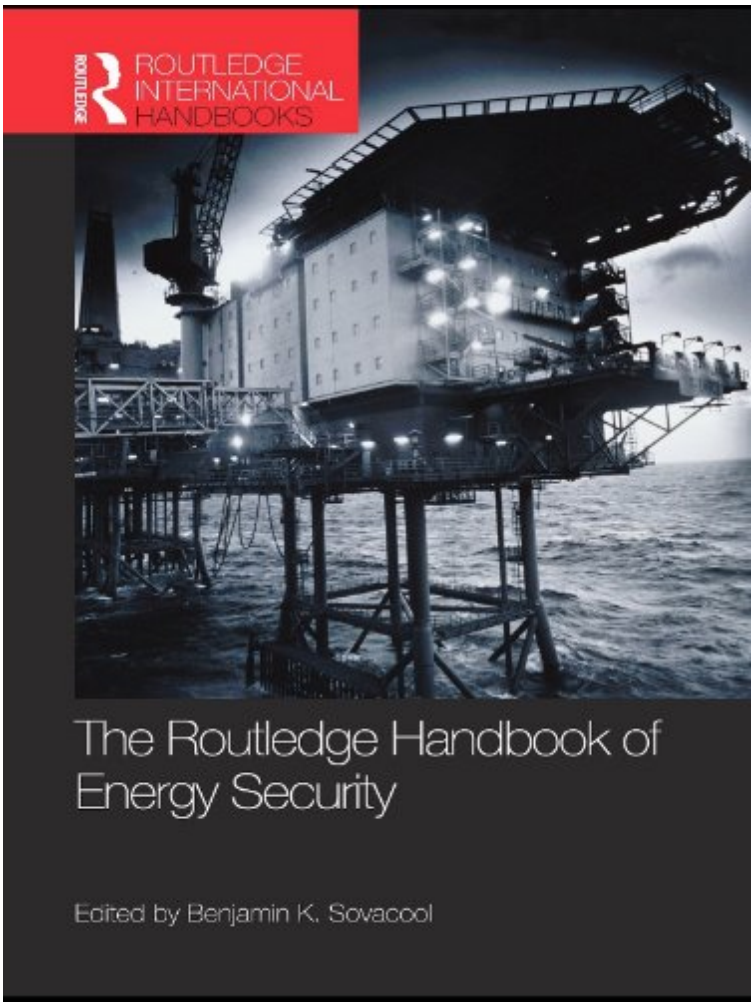

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From Routledge : The Routledge Handbook of Energy Security (Routledge International Handbooks) before purchasing it in order to gage whether or not it would be worth my time, and all praised The Routledge Handbook of Energy Security (Routledge International Handbooks):

1 of 1 people found the following review helpful. Academic and dry but still goodBy EnergyScholarAlice's review is a bit harsh. Yes, the book is scholarly and academic, making it somewhat dry, but it's very well done and accomplishes the three things it sets out to do: (1) define energy security, (2) discuss its different dimensions, and (3) propose and track ways of measuring progress or performance on energy security.The first chapter is pretty good, as Alice notes, but the rest of the book is just as clearly written. The book has lots of footnotes, and its style is certainly technical rather than popular, but the book is interesting and presents a fascinating discussion of how energy security concerns

intersect with issues of sustainable development, equity and justice, the environment, and public policy, to name a few. I recommend it.0 of 4 people found the following review helpful. I'm not feeling secure if this is how the energy situation is viewed by expertsBy Alice FriedemannI'm feeling very insecure if the discussions and conclusions in this book at all represent the latest thinking of scholars on energy security.They remind me of the recent Harvard Crimson article "Students Walk Out of Ec 10 in Solidarity with Occupy", the class with the highest enrollment (700 students). They left class to protest the use of the ideas in their textbook "Essentials of Economics", the most widely used economics text book in the US and perhaps the world), a defense of neoclassical economics.For anyone interested in energy security and/or economics, you're better off reading Hall's Energy and the Wealth of Nations: Understanding the Biophysical Economy. Also read past and current posts at theoildrum, the booklist at energyskeptic, authors like Richard Heinberg, David Pimentel, etc.I'm always looking for a book that's realistic about the situation we're in and what leaders of any kind (academic, government, business, etc) intend to do about it. I thought this might be the book based on the introduction. Here are some of the interesting facts in the first 31 pages:Fragility of pipelines delivering natural gas (NG) outside of Canada USA (p 12)* Countries through which pipelines go through can demand more "rent" or steal NG* Gluts or shortages break agreements as the side with an advantage tries to renegotiate the contract, making a stable supply difficult* When prices are high, suppliers try to increase the amount piped to consumers, leading to more spills and accidents.* When prices are low, suppliers cut back on maintenance, leading to corrosion and interruption of flow.* Because it's so hard to ensure supplies, countries want to claim as many energy resources as they can, especially China (several examples are given).A list of wars that were caused or escalated over energy resources (p13):* WWI both sides believed control of coal, oil and NG were essential to win* Japan invaded Manchuria in 1931 to get their coal* Japan invaded oil-rich Indonesia, the resulting tension led to the decision to attack Pearl Harbor* WWII Hitler declared war on the Soviet Union to get oil* Soviety Union invaded Iran in 1945 and 1946 to get oil* Korean war: north Korea is coal-rich* Vietnam War: Vietnamese oil and NG* Soviet occupation of Afghanistan* Gulf War I was clearly about oil sparked by the Iraqui invasion of Kuwait* Vaclav Smil makes a case that nearly all recent wars of the 20th century were related to energy, including conflict between India Pakistan, Eritrea Ethiopia, China India, and the civil wars in Sri Lanka, Uganda, Angola, and Colombia.Energy used by the military (page 13):1) War - the most concentrated and devastating use of energy2) Mobilization of military forces. That includes constructing weapons of energy-intensive materials using energy to create them. Vaclav Smil estimates 5% of US Soviet energy used between 1950 and 1990 went to creating weapons and their delivery systems. Most casualties in Iraq and Afghanistan are attacks on convoys delivering fuel (very inefficiently). Up to 50% of the energy used by the U.S. Air force is used to haul energy fuels.3) War causes the disruption of energy services. In the current gulf war, insurgents are destroying energy infrastructure faster than Americans can repair it. By teaming up with criminals complex networks of attacks on electricity, NG, water, communication and other systems are done without sophisticated weaponry.Energy infrastructure was a key target in the 1991 bombing of Iraq. 20 power plants and 3 nuclear plants were attacked in the first wave, which released large amounts of radiation, fuel, and contaminated debris into nearby communities. The World Health Organization estimates that 42% of farmable soil was contaminated and a third of farm animals were exposed to hazardous radiation. A United Nations official admitted "Iraq has, for some time to come, been relegated to a pre-industrial age, with with all the disabilities of post-industrial dependency on intensive use of energy and technology."Another way of looking at war is to see it as the evolution of weapons to release destructive energy. Below is a chart from Cuter Cleveland's "Encyclopedia of Energy" chapter by Vaclav Smil "War and Energy" pp 364-7: Projectile/ KineticWeapon Explosive Energy (J)Bow arrow Arrow 20Heavy crossbow Arrow 100Civil war musket bullet 1,000M16 assault rifle bullet 2,000Medieval cannon stone ball 50,00018th century cannon iron ball 300,000WWI artillery gun shrapnel shell 1,000,000Hand grenade TNT 2,000,000WWII heavy AA gun High explosive shell 6,000,000M1A1 Abrams Tank depleted uranium shell 6,000,000WWII unguidedrocket Missile with payload 18,000,000Suicide bomber TDX 100,000,000500 kg truck bomb ANFO 2,000,000,000Boeing 767 (9/11) Hijacked plane 4,000,000,000Hiroshima atomic bomb Fission 52,000,000,000,000US nuclear intercontinental Ballistic missile Fusion 1,000,000,000,000,000Novaya Zemlya bomb (1961) Fusion 240, 000,000,000,000,000The authors are aware that trillions of dollars must be invested to cope with energy demand, and that this will be hard given "anachronistic regulations, trade constraints, intellectual property rights,...and channeling of energy investments in the direction of fossil fuels and nuclear energy". The authors are also aware of the external costs on the environment.They also admit that the reserves of fossil fuels they believe exist (page 21) "may appear plentiful, in truth they will run out soon". Their estimates of how much time is left, if there's a zero increase in production worldwide is 137 years coal, 60 years NG, 43 petroleum, 85 years uranium. But if production increases 5% then it's 42 years coal, 28 years NG, 23 years petroleum (ain't exponential growth grand? Search on exponential growth Bartlett to explore this further).Worse yet, the remaining fossil fuel is concentrated in only a few countries, which makes their delivery very vulnerable to disruptions in supply (page 22).This book estimates the real cost of building a nuclear power plant, based on independent assessments rather than industry reports, is about $5,500 to $8,100 per installed kilowatt, or $6 to $9 billion per 1,100 MW plant. The Keystone Center, and independent think tank, estimated that operating costs would be 30 cents per kWh the first 13 years and 18 cents/kWh once the plants were paid off. That means nuclear is more

expensive than NG, coal, wind, biomass, geothermal, landfill capture, and hydroelectric power. Worse yet, these costs don't even include:Decommissioning unexpected delays cost overrunsInsurance interest on loans early retirementsGetting rid of nuclear wasteBuilding transmission distribution networks to nuclear facilitiesNuclear plants are bound to have cost overruns given that the average time it too to build the previous 376 plants was more than seven years. The Congressional Budget Office of the USA estimated construction costs are twice as much as predicted and the risk of default on loan guarantees is more than 50%. Given how long it's been since plants were built, there's a knowledge gap as well - there aren't enough educated engineers to build plants now.As it is, nuclear plants lower costs by not doing enough maintenance.Pages 29-31 discuss how vulnerable energy systems are.* Energy systems are tightly coupled, centralized, capital intensive.* They're global, local, and at different technological levels.* These factors all multiply the ways things can go wrong. And there are so many ways energy supplies can be disrupted, such as weather, balloons, bullets, and small animals.* There's very little energy storage to buffer disruptions so that failure is sudden and unpredictable.* 90% of world trade is shipped by 50,000 vessels because it's significantly cheaper than shipping over land (sometimes a supplier thousands of miles away is cheaper than a supplier hundreds of miles away). 45% of this cargo is energy imported by energy hungry nations.Often power is generated far from users, creating that much more energy infrastructure in between that can break. For example, the average power plant delivers electricity a distance of 220 miles.The end uses aren't prioritized, so to keep subways and other essential services running, non-essential things like water heaters that can be off for a few hours are still kept going no matter how close the electric grid is from collapsing due to peak use.Natural gas must be kept flowing in pipelines or the pressure falls so low that the pipeline no longer works, and these pipelines can't carry oil or other alternatives so that doesn't happen.Some technologies depend on more than one kind of energy, so a disruption to one source makes it fail (i.e. a boiler that burns oil or NG will fail if the electricity needed to ignite and pump the fuel fails). Gasoline pumps depend on electricity.Other interdependencies: water treatment systems need electricity, thermoelectric power plants need water. "When built too closely together, failures in one system can cascade to the other. Broken water mains can short out circuits or electric cables, fires and explosions can ignite entire pipeline networks, earthquakes can cause gas mains to rupture and explode destroying facilities that survived the initial shock."I always want to tell terrorists there's no need to attack - all of our (energy) infrastructure is rusting, corroding, and falling apart, and isn't maintained properly. But nonetheless, they've tried and sometimes succeeded, here are the stats on the United States:* The FBI reports that 15,000 actual or attempted bombings occur each year, with about 2% directed at electric utilities* These bombings peaked in 1978 and were caused by frustration over higher energy prices* 1975: the New World Liberation Front bombed PGE pipelines in California more than 10 times* The KKK San Joaquin Militia have attacked NG infrastructure throughout Mexico and the USA* 1999: Vancouver police arrested a man for planning to blow up the trans-Alaskan pipeline so he could make a profit off of oil futures* 2001: a man attacked the trans-Alaskan pipeline with a high-powered refle, forcing a 2-day shutdown (but a hunting accident, not an act of terrorism)* Most vulnerable of all is the software controlling any kind of infrastructure you care to name. Computers and manuals seized in Al-Qaeda training camps had numerous manuals and information on attacking critical infrastructure.The list of attacks elsewhere in the world is too long to summarize.But from page 32 on it's all downhill. The authors know all of the above, but the rest of the book is dry, convoluted, arcane, pedantic - I don't see how military strategests, politicians, or anyone else would make decisions or policy or plans from it. Partly because it's not realistic about the situation usually, though the authors must know how bad it is.I should have known this by looking at the index and references cited - there's no systems ecologists like Hall, Cleveland, Odum, etc or mention of EROEI. Yergin and other mainstream authors are cited however - this is not a book based on science, more a closed world of mainstream government and think tank authors.Despite an okay critique of renewable energy resources in the introduction, many authors advocate for biomass and other sorts of systems despite all the evidence these are impossible due to the laws of physics. Others want to get fossil fuels from the arctic, deep sea, and other remote regions, climate change be damned.Discussions of the intersection of climate change and energy security are not of interest. Some carefully say that paying too much attention to climate will prevent us from getting enough fossil fuels. Others acknowledge climate will affect security systems so we should pay attention to it.But hell, let's face it, when people are starving and freezing to death in the dark, we're going to not only "drill, baby, drill", but use our vast military to grab resources, just as we are now in the Gulf (of Mexico and Middle East). All the essays that define and list are just dancing around the bonfire of WWIII but refusing to admit they feel any heat.There's this weird schizophrenic disconnect between the facts in the introduction, and here and there in the essays, with higher math measurements of energy diversity, energy security, energy services -describing issues so abstractly you wouldn't have a clue western civilization might ever collapse.Why not just go with "we're screwed"? The resulting papers would have been far more interesting and perhaps useful.

This Handbook examines the subject of energy security: its definition, dimensions, ways to measure and index it, and the complicating factors that are often overlooked. The volume identifies varying definitions and dimensions of energy security, including those that prioritize security of supply and affordability alongside those that emphasize availability, energy efficiency, trade, environmental quality, and social and political stewardship.? It also explores the various

metrics that can be used to give energy security more coherence, and also to enable it to be measured, including recent attempts to measure energy security progress at the national level, with a special emphasis placed on countries within the Organization of Economic Cooperation and Development (OECD), countries within Asia, and industrialized countries worldwide.? This Handbook:bull; Broadens existing discussions of energy security that center on access to fuels, including "oil security" and "coal security."? bull; Focuses not only on the supply side of energy but also the demand, taking a hard look at energy services and politics along with technologies and infrastructure;bull; Investigates energy security issues such as energy poverty, equity and access, and development;bull; Analyzes ways to index and measure energy security progress at the national and international level.This book will be of much interest to students of energy security, energy policy, economics, environmental studies, and IR/Security Studies in general.

'Sovacool has assembled a highly qualified set of contributors. Recommended.' -- Choice, January 2012 'a substantial and original scholarly achievement.' -- Energy Policy 'A comprehensive and in many respects innovative approach to the subject, which will undoubtedly make it a standard work of reference for researchers and practitioners engaged in the field hellip; a powerful, nuanced and diligently researched synthesis of the current energy security debate.' -- nbsp;International AffairsAbout the AuthorBenjamin K. Sovacool is an Assistant Professor at the Lee Kuan Yew School of Public Policy at the National University of Singapore. He is also a Research Fellow in the Energy Governance Program at the Centre on Asia and Globalization. He is author or editor of four books on energy issues.