As I've written about before, U.S. law massively subsidizes the nuclear power industry. In particular, a law called the Price-Anderson Nuclear Industries Indemnity Act dramatically skews the incentives to develop nuclear plants, and to site them in places where there is a lot of risk, because it requires the public to bear much of the financial risk associated with physical risk from nuclear facilities by capping operators' liability. The Act also pools all operators' risks under the cap, creating no incentive for any operator to consider the financial cost of safety risks and hazards unique to particular plants' operations or location. On top of this, the U.S. also has committed to pay the costs of managing spent nuclear fuel, recently estimated at $21.4 billion through 2071 (though the GAO believes this estimate may be greatly understated). While there are many reasons that nuclear power development has mostly been moribund in the U.S. over the past several decades, it's important to keep in mind that all the while, these subsidies have put a thumb on the scale in the opposite direction, by removing and shifting costs relating to nuclear power development and operation away from plant operators.

The Price-Anderson Act was designed to support the industry in the 1950s, when it was just getting off the ground and advocates believed that the liability for then-nascent risks was a huge barrier to innovation. It was not designed to be a permanent subsidy. But it has never been repealed.

One major impact of Price-Anderson is that it makes it unnecessary for plant developers and operators to procure adequate insurance, making it virtually unique among business ventures that pose risks of significant magnitude. Insurers are quite rational in their approach to risk. Anyone who believes that nuclear power's risks are low, or manageable, should be willing to let insurers price that risk. Indeed, analysts with a pro-regulatory/anti-nuclear position and libertarians alike, as well as other academic commentators, have articulated these concerns. The concerns, and the wide-ranging support for removing public subsidization of this risk, mirror similar concerns relating to other risks where government subsidies provide perverse incentives, such as flood and crop damage risks. Aside from the incentives and benefits it provides to the industry, Price-Anderson means that every American has a stake in the safety of nuclear power everywhere in the country, in the sense that we collectively bear that risk, whether or not we get the benefits.

Earlier this week, Michael Shellenberger, an ardent pro-nuclear energy advocate (who recently commented here on a post about the Diablo Canyon plant by Steve Weissman), defended nuclear power in a debate here at UCLA that also featured NRDC's Dale Bryk as well as Ken Caldeira and Mark Jacobson from Stanford (video is

at the link; the program is part of the UCLA Institute of Environment and Sustainability's Oppenheim Lecture Series). I was struck – as I often am when I hear advocates of nuclear power speak – at the absence of any acknowledgment of the U.S.'s subsidization of nuclear risk. Mr. Shellenberger has vehemently supported nuclear energy for the reason, among others, that it is cheaper than other zero-carbon energy sources in other countries, and has the potential to be cheap in the US. But in all the writings by him and his colleagues on why nuclear energy in the US is more expensive than it should be, and how to make it cheaper, I haven't found any evidence that he or others among current nuclear energy advocates have grappled with the implications of Price-Anderson, or other subsidies to the nuclear industry and costs attributable to that industry that our government has committed to pay.

I won't rehash here all the detailed observations from my prior post, but I urge anyone who cares about this issue to learn about it, in order to better consider the costs and benefits of nuclear power in light of the nature and magnitude of liability that the U.S. government has removed from the nuclear power industry. I am agnostic about nuclear power's role in our energy future, but if we are looking at costs, benefits, and risks, we need to consider all the costs and risks that our laws allow the industry to externalize. Now that Shellenberger and others are making a serious argument that we need nuclear energy in order to address climate change, it's especially important. Perhaps it may turn out to be good policy to subsidize some of those costs or risks, but I haven't really heard anyone try to defend it.

[Update: I have edited the post to be more accurate, in response to Michael Wara's comment below. I have added the word "adequate" to this sentence: "One major impact of Price-Anderson is that it makes it unnecessary for plant developers and operators to procure adequate insurance…"]