



Testimony

SB 760

Testimony in Support Before the Texas House State Affairs Committee

by Brent Bennett, PhD
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Chairman Paddie and Members of the Committee:

Life:Powered and the Texas Public Policy Foundation support SB 760 because managing the removal of the rapidly growing number of solar facilities in Texas is an important part of preserving our environment. This bill will also help equalize regulations for solar facilities with respect to existing decommissioning regulations for wind and thermal power plants, as well as oil and gas facilities.

We require energy companies to pay for most of the environmental costs of producing their energy, and solar facilities should not be treated differently. This bill is modeled closely after [HB 2845](#) from the previous session regarding the decommissioning of wind power facilities and has a similar requirement that the developer deliver financial assurance for the removal of their facility at the end of its life.

Other electricity generators face numerous regulations involving their waste streams. An entire chapter of Title 30 of the Texas Administrative Code is devoted to [regulating coal combustion waste](#), and extensive regulations exist for [plugging oil and gas wells](#). While we can debate how much energy companies should be required to do when decommissioning their facilities, we should no doubt be consistent with our policies for different energy sources.

As the committee considers this bill, **it is important to keep in mind that environmental protection is not just about air emissions.** Land use and water use are equally important. Given that solar facilities [use roughly 10 times the amount of land](#) to produce the same quantity of electricity as a natural gas power plant,* including the land used to extract and transport the gas, the 20 GW of existing and planned solar generation in Texas [will use up several times more land than the infrastructure](#) for our entire natural gas generation fleet.

Nationwide, it is estimated that about [10 million tons of photovoltaic modules](#) will have reached the end of their lives by 2050 and will need to be removed and disposed of or recycled. The surge of solar facilities being built over the next several years in Texas will be coming offline at about that time, so now is the time to put the proper protections in place.

This bill covers only the removal of solar facilities and returning the land to its previous state. However, we recommend that the Texas Legislature consider the disposal and recycling of solar panels and attendant equipment in future legislation. Solar panels are difficult to recycle or dispose of, and there are currently no adequate market incentives for doing so in an environmentally sound manner.

As a former materials scientist, I have a good understanding of how difficult it is to recycle solar modules. The aluminum frames are about the only part that is easy to recycle. It is not easy to melt down crystalline silicon and reform it, and there is not yet a process for doing so that is more cost effective than making new panels. Silver and copper wiring are of some value but are not present in large quantities in each panel. Glass is of little value for recycling. Given the disincentives for proper recycling or disposal and the cumulative societal and environmental benefits of doing so, some level of protection is justified.

We commend Sen. Springer for introducing this bill and Rep. Shaheen for sponsoring it in the House. The current language includes changes that adapt the bill to the specific needs of the solar industry, specifically extending the requirement to post financial assurance after 20 years to more closely match the 30-year life of many solar projects. We believe the current language is acceptable to all parties, and we encourage the committee to support this bill. ★

* See *Power Density* by Vaclav Smil, MIT Press, 2015 (<https://mitpress.mit.edu/books/power-density>)

ABOUT THE AUTHOR



Brent Bennett, PhD, is the policy director for Life:Powered, an initiative of the Texas Public Policy Foundation that reframes the national discussion on energy and the environment. As part of the Life:Powered team, Bennett regularly speaks with policymakers, energy experts, and industry associations across the country. He is responsible for fact-checking the team's work and spearheading many of the team's policy and regulatory initiatives. He has written extensively on how America has improved its environment while growing its energy use and on the physical limitations of renewable energy and energy storage.

Prior to joining the Foundation, Bennett worked for a startup company selling carbon nanotubes to battery manufacturers, and he continues to provide technology consulting to energy storage companies. His early years were spent in the oil country of Midland, Texas—the heart of the oil patch—where he has been a student of energy his entire life.

Bennett has an MSE and PhD in materials science and engineering from the University of Texas at Austin and a BS in physics from the University of Tulsa. His graduate research focused on advanced chemistries for utility-scale energy storage systems.

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