FACT 03. Decommissioning

Decommissioning Plans are Mandatory

According to the county's planning process, any solar project can only be installed, when there is a sufficiently robust decommissioning plan for that solar project at the end of its economic life.

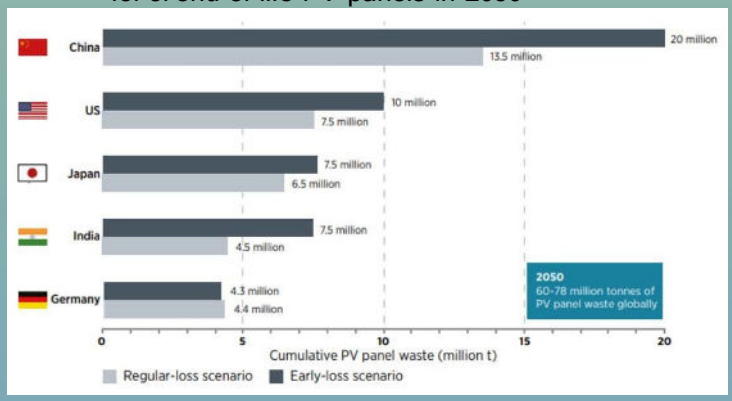
Since March 2020, Virginia law amended into both HB 2621 and SB 1091, requirements for a written decommissioning agreement to be either part of the local project approval process or a condition of site approval.

It requires developers to provide a bond for decommissioning costs based upon the estimate of a licensed professional engineer. A percentage of the net salvage value of the solar panels and other equipment can be included in that estimate.

In addition, the company must stabilize the soil, restore the ground cover, and dispose of all materials.

Any solar project that gets put forward for zoning will have complied with this consideration to the satisfaction of the planning board.

Cumulative waste volumes of top five countries for of end-of-life PV panels in 2050



Nobody knows what the future holds

What will happen in 40 years when the solar project has reached the end of its economic life? We won't pretend to know. Maybe a new technology will be installed instead, maybe there is no need for solar power anymore. One thing we know is that we make sure the county is protected and not left with any financial responsibility for removing the installation.

Economic life

Every solar project will be installed with an assumed economic life of 40 years. Like many other power generation and distribution facilities in the country, this is a conservative assumption. Distribution lines, coal burning facilities and substations that were installed 50 years ago, still work and provide power to our homes every day. The cost of installation has long been recovered so these assets are continuing to add income to the companies that operate them. So long as the cost of maintaining the facility is less than the income, the project will be economically feasible.

In addition, it is highly likely that technology will advance, for instance with higher capacity panels, or energy storage. While a new upgraded facility would require new permits, the existing infrastructure may lend itself to upgrades and a new 'lease of life'. Alternatively, it may be determined that in 40 years' time the most valuable and economical use of the land is not to host a solar facility, but to develop residential properties or return to agricultural use. It is the property owner's right to determine what to do with their land, subject to the local planning conditions.

Virginia Is Not Alone

Legislators across the nation have grappled with the issue of decommissioning for everything from nuclear and coal plants (both very very expensive) to solar facilities.

The consensus from states along the east coast is that a decommissioning plan should assume a cost of between $0.018 and $0.03 per solar panel.

Best practice suggests that this number is reviewed every 5 years and secured in a bond for the county.

99% of a solar panel can be recycled

The great news is that most solar panels are made of only a few very safe and widely recycled components. Glass, quartz, both made of sand, and aluminum make up the bulk of a standard solar panel. As more solar panels reach the end of their economic life, more recycling facilities will become available, re-purposing them for a new life.

Solar panels are safe

97% of all solar panels are made mainly from glass, quartz and aluminum which are safe, nontoxic materials. Whether during their operational life or at decommissioning, solar panels are safe and clean, just like the electricity they produce.

In the compilation of this information sheet, we have used scientific reports, journals and facts. Inovateus Solar is a solar company and proponent of clean sustainable energy generation, the regeneration of soil and biodiversity and of sustainable local development.
For further reading we recommend the Science and Facts section of this publication.

Science & Facts

- "How Virginia is breaking logjams around solar energy legislation" https://energynews.us/2019/05/07/how-virginia-is-breaking-logjams-around-solar-energy-legislation/
- "What to do with old solar panels: Cost estimates for decommissioning solar power plants" https://commercialsolarguy.com/2020/03/20/what-to-do-with-old- solar-modules-costs-estimates-for-decommissioning-solar-power-plants/
- "Facts and Figures about Materials, Waste and Recycling" https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials#:~:text=The%20Current%20National%20Picture,-EPA%20began%20collecting&text=The%20total%20generation%20of%20municipal,25%20million%20tons%20were%20composted.