

House Environmental Resources and Energy Committee

12/15/21, 9:00 a.m., Room G50, Irvis Office Building

by Wade Davis, Pennsylvania Legislative Services

The committee held a public hearing to discuss a bill and the bonding and decommissioning of solar and wind installations.

HB 2104 Rapp, Kathy - (PN 2443) Amends Title 27 (Environmental Resources), providing for decommissioning of alternative energy facilities. Provides requirements and exceptions for alternative energy facility agreements. Provides for the establishment of proof of financial assurance from a banking institution, the amount of financial assurance to be equal to the cost of decommissioning the alternative energy facility, the delivery of proof of the financial assurance to a county recorder of deeds, and that bonds or escrow accounts are acceptable methods of financial assistance. Provides guidelines for financial assurance forms and decommissioning plans and the information to be provided in the forms and plans. Any county, municipal, or local government or ordinance that impedes decommissioning of an alternative energy facility shall be preempted and without force and effect. The chapter shall not apply to a nonutility owner or operator of a net-metered distribution generation system with a nameplate capacity of not greater than 3,000 kilowatts or a farm who owns and operates an alternative energy facility on the farm premises. 27 Pa.C.S. section 4304 shall take effect immediately and the remainder of the act is effective in 180 days.

Chairman Metcalfe stated the discussion will focus on alternative energy. He claimed President Joe Biden is moving the commonwealth from fossil fuels to alternative energy sources.

Minority Chairman Vitali interrupted and raised an objection to Chairman Metcalfe's comments as a "cheap shot" at the President. The two briefly argued until Chairman Vitali was convinced to shut his microphone off.

Chairman Metcalfe stated DEP was allowed to testify but declined. He introduced

Rep. Rapp, primary sponsor of House Bill 2104, focused on waste that accumulates from dismantling energy-producing technology. She explained over the next four years, 8,000 wind turbine blades will be removed per year across the country and the blades are unable to be recycled or repurposed. She added solar panels are made up of materials that are similarly difficult to recycle. She wondered where the commonwealth will dispose of these materials as "there is no plan."

Scott Elias, senior manager of state affairs, Mid-Atlantic, Solar Energy Industries Association, noted "that solar means business." He detailed solar power has a growth rate of 42 percent over the past decade, and Pennsylvania has 400 solar power projects planned across the commonwealth. He highlighted solar power as bringing in increased revenue streams and financial benefit to farmers and that solar panels can be recycled and refurbished. He supported House Bill 2104's consideration of environmental recycling and financial assurance but expressed his hope the bill includes a letter of credit as an eligible financing source.

Chairman Vitali expressed his support for alternative energy but expressed his concern over House Bill 2104's lack of provisions for oil and gas disposal. He asked if bonding provisions for gas and oil "makes more sense" as a competitor to solar energy. Elias responded he is testifying on solar energy and is unable to comment on gas and oil.

Chairman Metcalfe commended Elias for his answer and stated the question was not relevant. The two argued briefly again and Chairman Metcalfe told the minority chairman to shut his microphone off

Rep. Rapp inquired where the solar panels are manufactured and where are the materials used in the solar panels gathered. Elias responded materials are collected in the United States and a large number are imported from southeast Asia.

Rep. Rapp asked if solar panel materials are shipped out of country upon the panels' end of life. Elias replied most models are not at the end of their life and models in other states are repurposed or recycled. He reiterated the exact number of end-of-life models is "pretty limited."

Rep. Rapp wondered if Elias supported her bill to set a standard for decommissioning across the state. Elias noted there are "many benefits" for one standard across the state. He added SEIA is willing to provide information to her for tweaking the bill.

Rep. James queried how much decommissioning a field of solar panels would cost. Elias could not provide an estimate and noted each project is case-specific. He supported the bill's provision to require a third party for cost analysis.

Rep. James disagreed with the notion of using letters of credit, citing their short timeframes instead of "30 years" to finance solar panels. He posited bonding is the method that should be utilized. Elias explained the letter of credit would need to be consistently updated, with a re-evaluation to occur every five years.

Rep. Schemel expressed his concern with decommissioning and claimed, "It's the Wild West." He wondered if there is another state Pennsylvania could use as a model. Elias offered New York, West Virginia, and Texas as examples for standardized decommissioning.

Zander Bischof, senior policy analyst, CCR, explained his organization supports House Bill 2104. He outlined eight components he considered important in decommissioning policy. He echoed earlier testimony of examining New York, West Virginia, and Texas for standardizing decommissioning.

Chairman Vitali focused on landfills being limited to 20 percent of decommission materials. Bischof responded he has not seen a 20 percent landfill requirement in other jurisdictions. He explained racking and frames on solar panels are salvageable and that solar panel modules themselves could be recycled in the future. He noted his expertise is specifically in solar energy and could not comment on other industries.

Rep. Rapp wondered if the testifier is familiar with efforts to "sell or rehome aged solar panels" to individuals or businesses within Pennsylvania. Bischof answered he did not know specifically if that is done within the commonwealth but noted other states have.

Rep. Rapp asked if these other states place solar panel materials in landfills as well as selling or rehoming. Bischof stated currently all methods are used to dispose of old solar panels. He conceded the "landscape is changing" and this may not be the case in the future.

Rep. Rapp inquired if end-of-life solar panels are shipped overseas. Bischof expressed his excitement recycling and repurposing is beginning to be done within the United States. He added his organization has not had any solar panels reach the end of their use.

Chairman Metcalfe asked if Bischof's organization deals with storage and how batteries are handled. Bischof responded affirmatively and explained the expectation for batteries is to last around 15 years compared to 25 years for solar panels. He noted his organization has not decommissioned any batteries. He added batteries have usage after they are out of power and contain valuable materials.

David Murray, director of solar policy, Americans Clean Power Association (ACP), detailed ACP's goals to expand alternative energy usage across the country. He noted the "diverse" energy economy. He explained while ACP supports House Bill 2104's consideration of clean energy, it disagrees with House Bill 2104 due to it placing burdens on those attempting to repurpose, decommission, or dispose of alternative energy modules and materials.

Rep. Otten asked what byproducts of wind and solar energy are going into landfills. Murray answered "about 98 percent" of windmill turbines are recyclable materials and glass and some other materials like lead result from solar panels.

Rep. Rapp asked if a landowner could sell solar panels in the event a solar energy company is unable to operate the solar panels. Murray explained the company would still be responsible for the solar panels and the company will usually ensure a way to decommission its modules in the event of any future hardship.

Rep. Rapp noted solar panels can last up to 25 to 30 years and expressed concern a company may not plan that far ahead. She asserted wind turbines are difficult to dispose of and asked if there is a way other than burying to dispose of wind turbine blades. Murray responded private businesses "will only grow" to recycle and reuse energy modules. He added recycled materials have been used to create objects for places like playgrounds and researchers are looking for more ways to recycle turbine blades.

Rep. Rapp wondered how a landowner will contact a defunct company that owns the alternative energy generators on their land. Murray reiterated the onus still lies with the company. He noted other companies could recycle or repurpose these materials, however.

Rep. Krueger inquired if Murray knows of the opportunities for private businesses relating to decommissioned materials. Murray replied better methods are developed constantly and "down the road" a diverse private market will exist for disposing of the materials.

Chairman Metcalfe expressed his concern for bonding alternative energy production companies that usually require materials from overseas and wondered in the future if landowners will run into trouble in an industry that fluctuates.

Rep. Herrin detailed the amount of waste currently generated by traditional energy production. She asked for clarification on the "burden" placed on the industry by House Bill 2104. Murray responded a landfill requirement has not been instituted in other states and such a requirement could increase costs and time.

Darrin Youker, director of state government affairs, Pennsylvania Farm Bureau (PFB), underscored the importance of returning land with decommissioned materials be returned to the status of the land's prior use. He supported the bill's provisions of requiring a third party evaluation every five years and increasing financial assurance for 20-year periods. He expressed a desire to avoid a decommission plan that relies on a salvage value calculation for equipment.

Rep. Rapp noted the oil and gas industry are regulated and utilize bonding. She inquired as to the difference between land usage for oil and gas compared to renewable energy production. Youker responded he is not sure of the amount of required land for production but suggested the footprint is smaller for renewable energy. He focused on protecting the landowner and ensuring land is returned to prior use when equipment is decommissioned.

Rep. Rapp expressed concern landowners may not have protection in the future due to renewable energy production's recent development. Youker noted PFB attempts "to envision this from the worst-case scenario," such as land reclamation in the event the alternative energy is defunct.

Chairman Metcalfe emphasized the 20 percent landfill and asserted it is doable.

Chairman Vitali detailed \$2,500 is the usual amount for a bond but cleanup can average \$40,000 for an oil well cleanup and estimated 200,000 orphaned and abandoned wells in Pennsylvania. He asked for the benefits to farmers utilizing solar energy. Youker stated the "predictability of lease payments" is a relief to farmers. "Organizationally, we always want to make sure our most productive farmland remains our most productive farmland," he declared.

Rep. Rapp noted a history of abandoned gas wells and mines in the commonwealth. She added she does not want to see solar and wind producers end up orphaned or abandoned like gas wells and mines. She asserted her bill acts to counter this in the future.

Rep. Schemel highlighted farmland being taken for use to establish solar panel fields. He detailed increased costs and need for more labor are issues affecting these farmers. He asked if alternative energy contracts utilize less productive areas of farmland. Youker repeated his sentiment of keeping productive farmland stable. He stated he wants to leave the decision of how land will be used up to the landowners.

Chad Forcey, executive director, PCEF, detailed his organization's inclusion of renewables in private markets. He explained the solar energy leads the growing alternative energy industry. He offered PCEF's support of House Bill 2104 for encouraging competition and protecting consumers. He noted standardized regulations for decommissioning promotes safety and economic efficiency.

Chairman Metcalfe wondered if homeowners are aware of the responsibilities required at the end of a solar panel's life. Forcey replied "there isn't any one standard" relating to smaller solar panel projects. He asserted natural forces would not disincentivize the use of a rooftop solar panel. He explained energy production is measured for efficiency. He noted Pennsylvania is "unique" in this regard.

Chairman Metcalfe related his constituents' complaints regarding disposal of their old television sets and expressed his worry people will struggle to dispose of equipment like solar panels in the future. He listed several toxic chemicals contained in solar panels and asked if these chemicals are not considered hazardous due to being sealed within the panel. Forcey responded affirmatively and explained the electronic components of the panel are the main source of these chemicals. He stated, "It's probably more of a question of waste than it is toxicity." He supported legislation that helps to extract and save valuable minerals found within alternative energy equipment.

Chairman Metcalfe claimed China controls 98 percent of valuable mineral production. He supported alternative energy and downsizing the number of byproducts produced by energy production.

DEP and **MAREC Action** also submitted testimony.