



January 14, 2021

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Comment for Proposed Rulemaking: CO₂ Budget Trading Program (#7-559)

Dear Mr. Trivedi and Ms. Demjanick:

Next LVL Energy, LLC submits the following comments regarding Proposed Rulemaking by the Environmental Quality Board ("EQB") to amend Chapter 145 of Title 25 of the Pennsylvania Code to add Subchapter E relating to a CO₂ Budget Trading Program ("Proposed Rule").

As a company, we are supportive of Pennsylvania joining the Regional Greenhouse Gas Initiative ("RGGI"). However, in order to maximize the carbon emission reduction goal of RGGI, we recommend that the abandoned well plugging offset program opportunity which had been in prior drafts of the rule before promulgation of the proposed rule be added back into the final rule.

We explain our rationale for this addition back into the rule herein but, in summary, we will establish herein that an well plugging offset program addresses a legacy issue of methane emissions that has long been recognized by DEP and others to pose an environmental and safety threat and that offsets that can be achieved by a well plugging and offset program are "real, additional, verifiable, enforceable, and permanent within the framework of a standards-based approach" as outlined in the 2017 RGGI Model Rule. We also explain how Next LVL Energy is able to provide effective and cost-efficient solutions to the problem of identification and measurement of abandoned and orphaned well methane emissions for the purposes of well-plugging. As such, we believe that DEP should restore the methane offset program in order to address this significant greenhouse gas emissions source.



1.0 About Next LVL

Next LVL Energy (NLE) is a plugging and well servicing company headquartered in the Pittsburgh area and is committed to be the Appalachian Basin's most specialized, efficient, and cost-effective plugging service provider. Founded in 2020, NLE is leveraging decades of industry experience to provide high quality and efficient solutions to a demanding and cost sensitive industry.

The principals of NLE have nearly 100 years of experience in the oil and gas industry and have held field level through executive positions at small and large E&P companies throughout the continental United States. NLE leans on the industry experience of the principals to solve challenging downhole operational issues that arise in plugging very old wells with little to no well history. The NLE team has supervised the successful plugging of over 500 oil and gas wells of all types. Our approach and experience separate us from our peers and allows us to plug these wells more efficiently and cost effective. NLE's principals were also pioneers in streamlining and transforming traditional well development programs into a manufacturing operation. Through utilization of the industry's newest tool technologies and the integration of data technology, the team was able to improve efficiencies and drill some of the most challenging wells in Appalachia.

2.0 Abandoned Well Methane Emissions: A Significant Issue for Pennsylvania

Oil and gas wells have existed in Pennsylvania for over 160 years. Today PA DEP enforces rigorous, science-based safety and environmental regulations, providing appropriate environmental protection. The natural gas industry expends significant sums every year on environmental, health and safety programs as well as compliance. However, older industry practices have left the state with many abandoned and orphaned wells leaking methane into the atmosphere and other pollutants into the soil and water.

Leaks in wells do not automatically abate. Orphaned and abandoned wells deteriorate over time. Wells that are not leaking today or leaking minimally could become significant emitters as materials deteriorate and decay, ground shifts on the surface, and subsurface erosion occurs. Considering the likely increasing effects of GHG emissions, NLE believes that addressing the problem of uncontrolled and potentially increasing methane emissions from orphaned and abandoned would be in the public interest.

3.0 A Well Plugging Offset Program Can Deliver Offsets That Are "Real, Additional, Verifiable, Enforceable and Permanent Within The Framework of a Standards-Based Approach

It is important to note at the outset that DEP has already recognized that well plugging programs can be economically implemented, and accurate accounting and measurements be made to monitor.

At the meeting of the Oil and Gas Technical Advisory Board on May 20, 2020 there was discussion of the ongoing DEP well plugging study at the Cornplanter State Forest. According to the Minutes (Attached as Exhibit X), Mr. Pelepko's states that DEP has "conducted a study to determine the volume of methane that is emitted from a subset of all known abandoned wells". See p. 4. Mr. Pelepko further notes that "DEP staff used highly sensitive monitoring of methane leak rates using low cost methods". See p.4



Additionally, In the same Power Point presentation referenced above Mr. Pelepko referenced the Cornplanter State Forest project currently being undertaken by DEP. It was reported that preliminary leak information has been developed, i.e., 11 of 62 wells (18%) were determined to have measurable leaks.

NLE agrees with DEP that there are effective, sensitive, accurate and economical ways to measure emissions and, therefore, calculate avoided emissions from plugged wells.

NLE has partnered with a company that has developed new technology and software that can identify leaking wells utilizing a highly sensitive camera. Once the well has been located, NLE would utilize this camera that has the capabilities to identify and map the emission plume with a reasonable amount of certainty. The equipment needed to measure the plume is the camera, a computer with proprietary software to process the data from the camera, and a trained specialist to operate the camera and process the data. The equipment can be set up in 15 min and the monitoring/mapping of the plum can be completed in 60 minutes. Pairing the software with the camera takes away much of the previous uncertainty of quantifying the gas emission plume. This technology would eliminate the necessity of having to conduct direct measurement to quantify the volume of the emission plume.

This is new technology and software. The development of which was in response to the new Canadian Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector) SOR/2018-66. Those regulations were released in 2018 and became effective in 2020. The technology has been presented to regulatory officials and has been successfully deployed in Canada and in the United States.

NLE has the ability to take the known wells to the department and deploy a measurement program and prioritize the worst offending wells. NLE has experience in large scale project management and could assist the department in most efficient and cost-effective way to deal with the orphan well problem and provide a long-term solution to reduce methane emittance.

4.0 The Well Plugging Offset Program Should Be Restored

The reasons for removal of the methane emissions offset remain unknown with no discussion in the Preamble to the proposed rule or other public documents. As best we can determine, it appears that the removal is related to the price of CO₂ cited at the meeting of the Oil and Gas Technical Advisory Board on May 20, 2020 when DEP stated that given the current price for CO₂ (i.e., \$5.65 per ton of CO₂) when compared to the costs to plug abandoned wells, the benefit was considered to be outweighed by the costs to set up a monitoring and evaluation program to track the offset of methane from abandoned wells.

NLE believes that it is possible to meet the standards for being real, additional, verifiable, enforceable, and permanent.

Furthermore, NLE stands ready to work with DEP and lend its expertise to shore up the technical details and mechanics of the offset program. Even if there is currently not an off the shelf constructed program to monitor evaluate and track offsets, that is not a reason to totally abandon the offset program now.

The May, 2020 assumption regarding auction price is unlikely to remain accurate into the future. The price from the last auction in December 2020 was \$7.41/ton – a over 30% increase from the price DEP used at the May 20, 2020 TAB meeting. It would be fair to assume that auction price will continue trend up in the future and should be considered in the policy making of the program.

Also, as to price, it is most reasonable to project an upward trend in RGGI carbon pricing for several reasons. First, RGGI allowance prices have shown upward movement over time. Furthermore, not only was there a demonstrated increase in allowance prices between 2016 and 2020, but further upward price pressure is expected based on the program design and other outside factors. Since the cap will decrease over time, (i.e., 30% between 2020 and 2030¹), the allowances will become scarcer and prices will increase over this decade. A separate upward force on prices will be injected because the Biden administration will be taking steps, as promised in the Biden Clean Energy and Climate Action Plans, to introduce carbon control measures and that will further exert upward pressure on RGGI carbon prices over time.²

Pennsylvania's first RGGI auction will likely be in February 2022. By 2022, the allowance price lifting impacts of both the decreasing cap level and the onset of the Biden administration programs will be in effect. Even if the projections about auction pricing are debated, it would be most unfortunate to eliminate a worthy program based on a snapshot in time of allowance prices.

Additional Collateral Environmental, Economic, Health and Safety Benefits

There is strong precedent already in Pennsylvania's RGGI process to take into consideration additional collateral environmental and safety benefits of certain aspect of Pennsylvania's RGGI program. In fact, in establishing the waste coal set aside program of Pennsylvania's RGGI the EQB Preamble states as follows:

The Board is establishing this waste coal set-aside in this proposed rulemaking because waste coal-fired units provide an environmental benefit of reducing the amount of waste coal piles in this Commonwealth. Reducing waste coal piles is a significant environmental issue in this Commonwealth because waste coal piles cause air and water pollution, as well as safety concerns. Waste coal-fired units burn waste coal to generate electricity thereby reducing the size, number and impacts of these piles otherwise abandoned and allowed to mobilize and negatively impact air and water quality in this Commonwealth... Given the environmental benefit provided, the Board determined that it is necessary to assist owners or operators of waste coal-fired units with meeting their compliance obligation under this proposed rulemaking. This legacy environmental issue

¹ https://www.rggi.org/sites/default/files/Uploads/Program-Review/8-23-2017/Announcement_Proposed_Program_Changes.pdf

² This relationship between federal carbon emissions control programs and RGGI allowance prices is well documented. RGGI allowance prices rose after the August 2015 release of the Obama Clean Power Plan. The only pronounced drop in RGGI allowance prices happened in 2016-2017 and that was a response to the Supreme Court's suspension in February 2016 of the Obama Clean Power Plan. So, there is clear relationship between increased federal government activity on carbon emissions control and RGGI carbon allowance prices. See <https://www.eia.gov/todayinenergy/detail.php?id=31432>



from this Commonwealth's long history of coal mining further underscores why it is vital to not leave additional environmental issues, like climate change, for future generations.

50 Pa. Bull. 6217 (November 7, 2020)

Well plugging presents at least the degree of collateral benefits as do waste coal plants and probably more. Importantly, well plugging presents direct carbon emissions reduction/prevention benefits which is the essential purpose of the RGGI program. Abandoned wells are a legacy issue related to this Commonwealth's long history of oil and gas production. Abandoned wells cause "pollution, as well as safety concerns. It is a vital here with respect to well plugging as it is for waste coal plants to "not leave additional environmental issues, like climate change, for future generations. Well plugging also provides improved water quality as abandoned wells leak oil, natural gas, other pollutants that can impact ground and surface water. Abandoned wells also present a safety risk as abandoned wells pose a risk of explosion and negative health effects for both commercial and residential properties. Further, the presence of abandoned wells reduces property values, negatively impacts land and economic development, as well as recreational and conservation opportunities.

Moreover, Pennsylvania well plugging can produce good paying Pennsylvania jobs. While critics of Pennsylvania's entry into RGGI cite loss of jobs at the outset from the program, an offset program will create jobs. While we understand that it has been said that well plugging may be a funding target down the road, this issue will only continue to grow with time and should not be the basis to eliminate a worthy offset program at the outset of the RGGI program. A two-front approach on this critical problem is *a fortiori* better than only a one front approach.

Abandoned Well Plugging Is an Important and Unique Issue to Pennsylvania

As has already been alluded to, abandoned wells are a problem particular to Pennsylvania and unique to any RGGI state with perhaps the exception of Virginia. NLE believes that Pennsylvania should create environmental programs that suit the unique needs and challenges of Pennsylvania. Within both DEP and the many highly skilled companies that work in the energy space, the expertise and knowledge exist to create programs that solve Pennsylvania-specific problems. We believe that other states which do not share Pennsylvania's unique history, geography, economy, and experience should have little influence on what is best for our environment.

Thank you for the opportunity to submit the above comments. NLE looks forward to working with PA DEP to address this important issue.

Sincerely,

A handwritten signature in blue ink, appearing to read "Bradley Maddox", is written over a light blue horizontal line.

Bradley Maddox
CEO
Next LVL Energy, LLC