

## A STRONGER Oil and Gas Industry

With the rise of unconventional forms of gas and oil extraction such as hydraulic fracturing, new regulations and guidelines are needed to protect human and environmental health alike. One such organization working to review state regulatory programs is “STRONGER,” the State Review of Oil and Natural Gas Environmental Regulations. STRONGER is a non-profit organization that evaluates state-level oil and gas environmental regulatory programs against criteria developed by multi-stakeholder working groups. The organization is led by a Board of Directors that consists of nine total members: three state oil and gas regulatory officials, three environmental/non-governmental public interest representatives, and three oil and gas industry representatives.

The State Review process is voluntary—a state program can request to have its rules and regulations reviewed against a variety of criteria on different subjects formulated by STRONGER. STRONGER begins the review process by creating a questionnaire to be completed by state agency staff. STRONGER invites Official Observers, which are often representatives from state or local government and federal agencies (e.g., Bureau of Land Management, Environmental Protection Agency, Department of Energy), and assembles a review team of 3-6 members. At least one industry representative, one environmental interest representative and one state representative are selected.

The review team prepares for an in-state interview that involves analysis of the completed questionnaire and the volunteer agency’s regulations and policies. The interview is an open meeting, and interested members of the public can attend and submit questions. Post-interview, the review team drafts an initial report with its findings and recommendations which is then sent back to the official observers and the state agency for comments. These comments are reviewed, and the draft is finalized and published for distribution. These reviews serve to highlight the good things each state organization is doing, and support them as they strengthen their programs, not penalize them for any existing shortcomings (Steadley 2018).

STRONGER uses a multi-stakeholder process to create its reviews and has partnerships with many organizations familiar with environmental and industry concerns. Some examples include, Interstate Oil and Gas Compact Commission, Independent Petroleum Association of America, Groundwater Protection Council, the U.S. Environmental Protection Agency, the U.S. Department of Energy, Earthworks, the Environmental Defense Fund, and the American Petroleum Institute.

STRONGER’s guidelines are created based on the decision making of the Board of Directors and are intentionally designed to be programmatic rather than prescriptive. The guidelines outline the programmatic elements and goals a successful oil and gas regulatory program should establish in order to balance conservation of the resource with effective protection of the environment and human health. These guidelines focus on extraction and production waste management, abandoned well sites, hydraulic fracturing, air quality, etc.



The oil and gas industry as a whole is a rapidly developing industry—new technologies are consistently emerging, regulations are being revised and changed, and better industry practices are being created. As a result, the guidelines that STRONGER sets must be updated. The Board of Directors routinely addresses updates and additions in order to stay current with trends in the industry. These updated guidelines can then be used to administer follow-up reviews to previously evaluated regulatory agencies. *An impressive 76% of STRONGER’s recommendations were implemented into state environmental regulations over the past 19 years based on these follow-up reviews.*

### ***Connections to Ohio and the Appalachian Basin***

Researchers at Ohio University are conducting a study to examine voluntary (beyond the scope of regulation) best management practices and programs (BMPs) that aim to reduce greenhouse gas emissions from oil and gas production. This work, funded in part by the Bureau of Land Management, focuses on the Northern Appalachian states of Ohio, West Virginia, Pennsylvania, New York and Maryland to create a broader, non-partisan dialogue about opportunities and challenges associated with voluntary BMPs. Of course, this five-state shale region is home to the Marcellus and Utica shale one of the most rapidly developing unconventional shale regions in America (Clemente 2017).

Some members of STRONGER’s board have ties to the region, and of the five states identified above, four have received reviews (excluding Maryland). Within these reviews, STRONGER has completed hydraulic fracturing reviews in Ohio and Pennsylvania, as well as an air quality review in Pennsylvania.

Pennsylvania: The Pennsylvania air quality review was the first air quality review related to the emissions of natural gas in the region conducted by STRONGER and completed in 2015.

- **Monitoring**: The STRONGER review team commended the Pennsylvania Department of Environmental Protection (DEP) for adding air quality monitors to areas (per public request) near areas of significant oil and gas infrastructure. However, the review team also recognized a lack of air quality monitoring systems in more remote, rural areas and recommended that monitoring systems be placed in any area where shale gas infrastructure is present. The review team suggested that at these locations, it is important that the monitoring systems can detect all forms of gas leaks especially those associated with the production. STRONGER also recommended that the DEP enforce additional operator self-inventories to get a better projection of emissions in the area and to release that information to the public.
- **Permitting**: Regarding permitting in Pennsylvania, the DEP has created a permitting system that has leak detection and repair requirements built into it before a new gas structure is built (targeting compressor stations). STRONGER recommended that for existing infrastructure, the DEP should take necessary precautions to review reports of emission leaks and address those facilities that report frequent leak episodes (i.e., production, processing, transportation, and distribution facilities) (Kuster 2016).

Ohio: Ohio received a review for its hydraulic fracturing regulations in 2011. This review was conducted on the Ohio Department of Natural Resources’ Division of Mineral Resources Management which has



jurisdiction over production and hydraulic operations. Because most air pollution sources in Ohio are regulated by the Ohio EPA, this specific review does not include all air emission regulations in depth (Wrotenbery 2011). However, interestingly, it does recommend that Ohio encourage operators to join the U.S. Natural Gas STAR Program (a resource for voluntary BMPs related to natural gas processes).

### **Conclusion**

Because STRONGER regulatory reviews serve to highlight what state regulatory agencies are doing well, as well as provide recommendations for continuous improvement, many of the recommendations proposed are BMPs for the oil and gas industry, or programs like Natural Gas STAR. It is in the best interest of state regulatory agencies to adopt STRONGER recommendations and request follow up reviews to further demonstrate their commitment to protecting human and environmental health.

STRONGER reviews can serve as best practices in themselves. And, because STRONGER reviews state regulatory programs, the recommendations they make can be adopted as part of state regulation with oversight and enforcement. This connects the voluntary review and recommendation process with even stronger adoption and enforcement actions.

STRONGER's work to enhance the protection of human and environmental health by providing guidelines and regulation reviews will become even more important as the uncertainty of federal regulations on oil and gas development—methane in particular—remains in the courts. Their multi-stakeholder perspective and guidance contributes to the growing dialogue about balancing economic development, energy security, environmental protections and community well-being in this quickly developing and changing industry across the region.

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### **Works Cited**

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