

# Marcellus EASE

## COMMUNITY SCIENCE VOLUNTEERS

PENNSTATE



### → Transdisciplinary Collaboration



Penn State personnel collaborated across departments

to develop programming for audiences throughout rural Pennsylvania. By combining the expertise of faculty from social science and science disciplines, the team supported community members in not only learning about shale gas development, but also communicating effectively about it.

### → Meaningful Learning



As part of the CSV course, participants completed both knowledge assessments and questionnaires

asking them to describe their own learning, attitudes about shale gas development, and activities in which they had applied their learning. Across these measures, participants demonstrated that they generally increased not only their knowledge of course topics, but also their awareness of how course topics related to their lives and how they might participate more effectively in community deliberations.

### → Relationship Building



Because of sustained contact between participants and the program's strong presence throughout the life of the project,

an emergent outcome of CSV was that some cohorts continued to stay in touch after their class had ended. These sustained groups also became key contacts for outreach as new project elements launched.



Fostering **civil dialogue** and **scientific knowledge** by supporting **critical science literacy** among adult community members

Marcellus Matters: Engaging Adults in Science and Energy (EASE) was a multidisciplinary initiative that provided adults in rural Pennsylvania with opportunities to increase their knowledge of science and energy systems and engage in scientific inquiry and investigation through the lens of natural gas development. The Community Science Volunteers (CSV) program was a 10-week educational program that aimed to introduce topics related to the science, engineering, economics, and community impacts of shale gas development. Moreover, a central goal of the program was to help participants build the skills needed to effectively participate in community discussion and decision-making about energy.

Delivered to 7 different cohorts across 7 counties over the course of the five-year project, CSV was longest running and farthest reaching element of the EASE project. Participants took classes and learned about the science, engineering, and economic background, and community impacts of shale gas development and Marcellus EASE. The CSV program was central to outreach and bringing people together, particularly as the project grew to include new elements, such as the Marcellus Citizen Science Network.



## Key Findings from Evaluation



At the end of the CSV program, participants reported significantly higher knowledge of how Marcellus Shale development relates to environmental resources, land use, energy choices, and communities.



Participants in CSV also reported significantly greater understanding of how science is conducted, how to evaluate and interpret scientific findings, how to participate in constructive conversations about contentious topics, and the complexity of energy choices.



Following the program, respondents also reported any relevant activities they had done or planned to do. The most frequent category of activity related to personal actions, such as aiming to do more individual reading about shale gas development, followed by interpersonal actions, such as engaging friends, family, coworkers, or neighbors in conversations about shale gas development, while some listed community and public activities such as community meetings..

**"My primary take-away is development of a bigger view of the issues. I did not feel a need to take a side and have not. I better understand that a careful course between is the only realistic choice."**

**- CSV Participant**



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