

WHITE PAPER: State of Texas Advanced Oil and Gas Resource Recovery (STARR) Program

Prepared by the Alaska Center for Energy and Power at UAF as a possible model for funding energy research in the State of Alaska

Overview

The State of Texas Advanced Oil and Gas Resource Recovery (STARR) Program is a mechanism for funding applied fossil energy research in Texas. Through the STARR program, the Bureau of Economic Geology (BEG) at the University of Texas at Austin Jackson School of Geosciences receives funds from the State on a bi-annual basis to analyze State Lands and other Texas properties and then advise and assist operators on how to increase current production or discover new production. The State requires Project STARR to be revenue neutral—that is, Project STARR must cause new revenue to flow into the State that equals or exceeds the amount that is appropriated to the program by the Legislature.

Program History and Context

The STARR Program was created by the Texas Legislature in 1995. The driving force behind the program's creation was the decline in production in the decades-long production of oil and gas on state lands. A large volume of the remaining oil and gas was deemed as recoverable through improved scientific understanding and strategic, targeted deployment of advanced recovery technologies. While implementation of advanced oilfield technologies has historically been the purview of major oil and gas companies, by the mid 1990's, many large companies had abandoned development of mature Texas oil and gas fields in favor of more lucrative opportunities elsewhere. This vacuum was filled by small producers and independents, many of whom had little to no advanced research or development capabilities. The Bureau of Economic Geology, funded through the STARR program, has stepped in to fill this needed technical support and assure opportunities for maximizing production of the State of Texas' resources are not missed. Primary activities undertaken by BEG using STARR funding include working with state land operators to 1) Deploy advanced recovery strategies and newly developed technologies on a field-by-field basis to ensure maximum recovery efficiency; 2) Encourage exploration in under-developed areas or new plays; and 3) Exploit unconventional hydrocarbon resources.

Overview of the Bureau of Economic Geology

The BEG existed long before the STARR program was created, and research through STARR is only one of the BEG's activities. Established in 1909, the Bureau of Economic Geology is part of the well-endowed (~\$400M) Jackson School of Geosciences at The University of Texas at Austin. Much like ACEP, the BEG runs like a business within the University of Texas system, with the primary goal of producing useful science that people can use right away. In addition, BEG serves as the State Geological Survey of Texas (the role the Division of Geologic and Geophysical Surveys fulfills in Alaska). BEG focuses on research 'at the intersection of energy, the environment, and the economy', and has a staff of approximately 200 scientists, engineers, economists, and graduate students (30 participate in the STARR program) who benefit from state-of-the-art facilities and equipment. Researchers generally do not teach courses and are not tenure track. They receive 1-2 months of base funding, with the remainder coming from external grants and contracts as well as project-based state funding sources such as the STARR program. BEG in its entirety expends about \$30M per year on its research programs. Funding sources are roughly divided as 1/3 industry, 1/3 state agencies, 1/3 federal.

Allocation of Funding

Approximately \$9.5 M biannually is appropriated directly to the University of Texas at Austin to support continuation of the program. This funding is not part of the base state operating budget, but is an increment that is added based on demonstration of performance. In general, the reported ROI to the state is approximately \$15-20 for every dollar invested. Results are published in a bi-annual progress report, and ROI calculated in conjunction with the State of Texas Controller's office using six agreed upon categories of soft and hard metrics. In addition, the progress report includes testimonials from the oil and gas industry partners regarding the value of the research conducted through the program.

