

# How Chevron is Meeting California's Environmental Standards

by Michelle Tostado

The USC Energy Institute invited Dr. Jonathan Lilien as a special guest to host a lecture on "Environmental and Societal Aspects of Oil & Gas production in California" as a part of its seminar series on The Business of Oil and Gas on February 23, 2016. Dr. Lilien is the Health Environment Safety Technical Service Manager at Chevron in Bakersfield, California. After a wonderful introduction by Executive Director, Dr. Don Paul, Dr. Lilien addressed the topics of oil and gas production in California and the environmental regulatory frameworks. He also discussed public stakeholder issues and the industry's response to the emerging trends.



Most of the oil found in California is heavy crude that is produced with an enhanced recovery method of steam flooding or cyclic steaming. A large



concentration of production is found the San Joaquin Valley region, where Chevron is one of the biggest operators. All of the operations have to follow federal and state level regulations, which regulate air quality, greenhouse gases emitted, and water use. At these levels, there is a mandatory reporting regulation that must be done by the operator and verified by a third party company, which can affect how many free allowances a company gets. Dr. Lilien discussed about an increase in regulations of methane handling due to a controversial leak just four months ago and because it has been found that methane is three to four times more potent than carbon dioxide of greenhouse gases. He talked about new rules of subsurface water injection for water disposal, especially in aquifers.

There are public stakeholder trends that have changed within the last couple of years with an increase of attention to oil and gas production in

California. This has been motivated by challenges from activists of non-governmental organizations and an active increase in environmental legislation. Some of the new legislation regulates well stimulation activities and water use reporting. With continued regulation, business' goals have been to protect the people and environment, defend their reputations and license to operate, as well as, maintaining and growing production. Some of their strategies include engaging key stakeholders, developing new partnerships, and increasing transparency by providing accurate information to the public. Dr. Lilien's talk ended with discussing how California has been in front of regulation curves and setting standards for regulations in other states. As Dr. Lilien stated, it is better to produce oil from California, which has higher regulations, than to get it from somewhere else, where it could be produced with a high environmental impact.