

# SHALE GAS, A HOT TOPIC AT CURTIN



The map highlights that Australia could be rich in shale gas.

Curtin University has recently undertaken a study focused on locating shale gas sweet spots in Western Australia, which could be fundamental for the state's future gas supply.

Unconventional Gas Research Group, sponsored by seven different companies, will be conducted by the Petroleum Engineering Department at Curtin.

The university also received a grant from the WA State Government, the Exploration Incentive Scheme, to fund the development to study the potential of shale gas in WA basins. A number of PhD students and Postdoctoral Research Fellows will be working on this project for up to three years.

Curtin University, Department of Petroleum Engineering, Professor Reza Rezaee said that many national and international oil and gas companies, which are active in onshore gas exploration and production in WA, are also keen to consider shale gas as a future target.

Rezaee said that although WA is in the early stages of shale gas development it has great potential.

"I believe unconventional gas resources are not an easy target to deal with", he said. "These sorts of resources can not be explored/exploited easily. Unconventional gas resources require a detailed fundamental study to locate sweet spots where there is good quality shale in terms of shale net thickness, organic material richness,

thermal maturity status, shale composition (brittleness) and depth."

Rezaee said that to be successful in producing gas from shale in commercial quantities, a multi-disciplinary study and the right economic environments are required.

Global natural gas consumption is estimated to grow 52% by 2030, an increase of nearly 2% annually from about 108 Tcf in 2008 to about 163 Tcf. With these predicted steep increases in the world's gas consumption, the ability to meet the demands for energy through 'conventional' gas production in the near future will become extremely difficult.

This is the main reason why many countries are now looking for other sources of gas and since shale gas has proved to be successful in the US, the same is expected to occur in Australia.

"The outcome is important as it secures a source of gas produced from onshore fields close to the population, and may tap into existing gas pipelines", he said.

Preliminary investigation indicates that there are 15 onshore basins around Australia and many shale intervals that could be considered as having very high quality shale gas. Rezaee believes that in the future, high quality shale gas could produce a large quantity of gas. Higher gas price structure is needed to make this happen which can be done by exploring the gas reserve.

Rezaee said there is a number of onshore drilling rigs with the capability of drilling and fracturing shales to produce the gas. ■