Could Hemp Support Our Future Energy Demand?

Hemp will play a critical role in shifting the planet's fuel sources from unsustainable towards sustainable, renewable and environmentally friendly."

This was claimed by Gareth Jones, from the University of WA addressing the topic, "Where should the world get its future energy from?"

Before ridiculing his analysis as the ramblings of a drug-induced hippie, consider that Shell judged his hypothesis sound enough to award him $1500 for it. He was but one of five students from five Perth universities to receive monies for their solutions to solving the world's future energy demand.

It is understood that Royal Dutch Shell has earned a reputation as the most gas-focused of the world's energy super majors. But when it called on university students to share their views of how the world's future energy needs could be met, the answers could not have been more diverse.

"I believe we are able to supply a significant amount of energy needed through hemp," Jones told the Shell Global Energy Forum on 26 September.

The topic was based on Shell's forecast of a global population of nine billion by 2050 and with it would come a doubling in energy demand coupled with a pressure on curbing carbon emissions.

Shell Australia Vice President, Peter Robinson, said he was "pleasantly surprised" by the diversity of the energy solutions proposed by the winning students.

"It underscores that there is no silver bullet," Robinson said at the conclusion of the forum that was attended by Federal Tertiary Education Minister Chris Evans and leaders from Perth's oil and gas Industry and its five universities.

Rebecca Grennell, from Edith Cowan University, said the world's oceans were "an ignored form of concentrated energy" and "it could be the first step to globally changing the amount of emissions produced as ocean wave converters are responsible for little or no emissions or pollution."

"If we convert as many coastal towns to wave energy as possible, carbon emissions will be cut drastically."

> **The challenge lies in the right mix of technology to generate effeciency**

However, she recognised that so far every alternative, renewable energy solution had some down side.

Murdoch University's Marcus Tang also focused on renewable energy and recyclable resources such as human and animal waste.

"They are abundant, accessible and have little or no claims of ownership," he said.

"The challenge lies in the right mix of technology to generate the required output and efficiency."

Cost is often an impediment for nuclear power, Notre Dame University's James Ball argued, although he cited production costs in Europe of 8.3¢ per KW hour, compared with 12.2¢ for onshore wind, 14¢ for hydropower and 28.8¢ for solar photovoltaic generation, in favour of his solution.

While he acknowledged that nuclear power had attracted significant public opposition, in terms of the reactor safety and the issue of waste storage, the backlash from the Fukushima disaster in Japan last year failed to factor in advances in technology.

Curtin University's Joshua Yarham argued that concerns over the storage of hydrogen were overdone.

His chosen fuel also had a higher burning temperature than natural gas.

"Regardless of the way our future energy is generated, the future standards for energy storage and transport will be hydrogen," Yarham said. ■

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