Scientific community called upon to resolve debate on 'net energy' once and for all

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"Net energy is a (mostly) irrelevant, misleading and dangerous metric," says Professor Bruce Dale, editor-in-chief of *Biofuels, Bioresources and Biorefining* (Biofpr) in the latest issue of the journal published today.

Net energy is a metric by which some scientists attempt to assess the sustainability and ability of alternative fuels to displace fossil fuel but recent debate in Biofpr shows that scientists are undecided on its merits as a tool.

Instead, in a series of corresponding articles clearly stating the case for and against net energy, Professor Dale calls for a more holistic approach which takes into consideration issues such as greenhouse gas emissions, petroleum displacement and economic growth, particularly in the developing world. He is calling on the scientific community to come together to help establish, once and for all, parameters by which to calculate fuel efficiency by using not just one, but several metrics that can be used in conjunction to give a fuller picture.

The articles – Net energy: still a (mostly) irrelevant, misleading and dangerous metric,
Bruce E. Dale; Net energy and strategic decision making: response to Professor Dale, Franzi Poldy; and Response to Dr. Poldy's questions in this issue, Bruce E. Dale – are the culmination of the ongoing heated exchange, which has already attracted a huge response, between those in favour and those against the use of 'net energy' as a metric.

Professor Dale says: "The election of the new USA president, Barack Obama, who is an open supporter of biofuels will put them very much on the agenda. We need to resolve this issue of appropriate metrics once and for all so we can concentrate on the real task at hand – to deliver viable alternative fuels and reduce our dependence on fossil fuels."

He adds: "Net energy is misleading because it does not give us the whole story of a fuel but instead asks us to make a judgement using a very small component of the decision making process, albeit an important piece of a large jigsaw. When trying to determine whether a fuel is viable or not, we not only need to consider energy in versus energy out but also the overall context such as petrol displacement, land usage and economic growth – this requires a balanced approach with several metrics."

However, in a corresponding article, Dr. Franzi Poldy, CSIRO Sustainable Ecosystems, Australia, disagrees, arguing that in order for policymakers and governments to make decisions about which fuels are best, they need to have numbers to work with to establish a way of calculating the benefits of potential fuels – net energy is the best way to do this.

He says: "Although net energy is not the whole story about any fuel, it is an important part of the story for those concerned with long-term energy supply at the whole-economy level."

Source: Wiley

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