

# International effort takes critical steps to accelerate growth of global biofuels market

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The governments of the United States, Brazil and the European Union (EU)—the world’s major producers of biofuels—today released an analysis of current biofuel specifications with the goal of facilitating expanded trade of these renewable energy sources. Spurred by increased market demands, this report was solicited by the U.S. and Brazilian governments and the European Commission (EC) on behalf of the EU, with the work conducted by an international group of fuel standards experts.

Biofuels—derived from biological materials such as plants, plant oils, animal fat and microbial byproducts—are gaining popularity worldwide as both energy producers and users seek ways to reduce greenhouse gas emissions, move away from dependence on fossil fuels and invigorate economies through increased use of agricultural products. As a result, biofuels are becoming an increasingly important commodity in the global marketplace.

One potential obstacle to achieving greater efficiency in the global biofuels market is confusion over differing—and sometimes conflicting—standards for characterizing the make-up and properties of biofuels. To clarify the current situation and identify potential roadblocks to improved compatibility, the U.S. and Brazilian governments and the EC convened a task force of experts from standards developing organizations (SDOs) to compare critical specifications in existing standards used globally (factors such as content, physical characteristics and contaminant levels that govern a

fuel's quality) for pure bioethanol and biodiesel, two key biofuels. The White Paper published today identifies where key specifications in the standards are:

- similar (and can be considered compatible);
- different, but could be reconciled in a short period; or
- irreconcilably different as they stand.

The “White Paper on Internationally Compatible Biofuels Standards” was requested by the governments of the United States and Brazil and the EC, and was produced by the joint task force after a six-month review process that considered thousands of pages of technical documents produced by ASTM International, the Brazilian Technical Standards Association (Associação Brasileira de Normas Técnicas or ABNT) and the European Committee for Standardization (Comité Européen de Normalisation or CEN). Standards developed by these three SDOs are currently being used in support of biofuels commodities trading between nations.

The experts found that these three sets of bioethanol and biodiesel standards, and the specifications they contain, share much common ground and, therefore, impose few impediments to biofuel trade. Nine of the 16 ethanol specifications reviewed, the task force states, are “in alignment” and all but one of the remaining specifications could be aligned in the short term. For biodiesel, the report lists six specifications as compatible. It suggests that many of the remaining differences could be handled by blending various types of biodiesel to create an end product that meets regional specifications for fuel quality and emissions.

In formal transmittal letters to representatives of the standards community, the U.S. and Brazilian governments and the EC on behalf of the EU applauded the efforts of the technical experts and encouraged the SDOs to consider the results of those efforts.

Recognizing that many of the issues relating to variations in specifications can be traced to different measurement procedures and methods, two leading metrology institutes—the U.S. National Institute of Standards and Technology (NIST) and Brazil’s National Institute of Metrology, Standardization and Industrial Quality (Instituto Nacional de Metrologia, Normalização e Qualidade Industrial or INMETRO)—are collaborating on the development of joint measurement standards for bioethanol and biodiesel to complement the efforts of the SDOs. Initial efforts focus on creating certified reference materials to support development and testing of bioethanol and biodiesel, and analytical measurement methods for source identification (to determine if a fuel comes from a renewable or non-renewable source and the source of origin of biodiesel, e.g., soy, palm oil, animal fat, etc.) by the end of 2008.

The United States, Brazil and the EU are all members of the International Biofuels Forum (IBF) and will continue to engage other IBF governments in future work. The named SDOs will also seek to involve their counterparts in the other IBF member countries—China, India and South Africa—in the effort to make biofuels standards compatible worldwide.

Brazil, the world’s biggest exporter of ethanol, already requires up to a 25 percent blend of ethanol with all gasoline that is sold. The EU has established a bioethanol blend mandate for its member states of 5.75 percent by 2010, and at least 10 percent of all vehicle fuels by 2020. In the United States, the Energy Policy Act of 2005 sets a 7.5 billion gallon goal for national biofuel consumption (usually ethanol) by 2012.

A link to the complete 94-page report is available at [www.nist.gov/biofuels](http://www.nist.gov/biofuels) .

Source: National Institute of Standards and Technology

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