The use of fossil fuels is considered the main cause of climate change. On the opposite side, renewable energies, including bioenergy, are presented as an environmentally friendly alternative that contributes to the energy independence and security. This would give us a scenario where the generation of energy also allows the care of the environment.

However, this scenario is not always fulfilled. For example, many cities around the world use biomass as fuel for heating, mainly forest biomass. In many cases, this produces pollution with high levels of particulate matter and polycyclic aromatic hydrocarbons (PAH). This is the current status of the cities in the south of Chile, where the wood as fuel has a great cultural roots and the market prices are lower than the rest of the fuels.

This pollution has multiple causes: misuse by the user, combustion technologies obsolete, lack of quality standards, etc. The quality of fuel is an aspect that must be addressed with urgency. Solid biofuels are produced from materials with different physical and chemical characteristics. In addition, the processes of production have high impact in the biofuel quality.

Ensuring quality of solid biofuels is vital to reduce pollution, to develop the market, and to provide more information and safety for the consumer.

Gaseous and liquid biofuels has a similar situation. To replace the fossil fuels, these biofuels should meet the appropriate quality specifications (standards) that will make it possible to use and share the infrastructure and many of the existing technologies. In this sense the new generation of biofuels may be considered "drop-in".

The requirement for rigorous standards to biofuels is a need to enable them to fulfill the promise to impact positively the environment while they are replacing the use of fossil fuels.

Dr. Edelio Taboada V.
Director
Renewable Energies Research Nucleus
Universidad Católica de Temuco