



Improving Bioenergy Economics: Forest Residues for Energy and Supply Chain Modeling

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Message from the Guest Editors

In modern bioenergy, biomass is used in district heating, electricity generation, and transport biofuels instead of traditional firewood burning. The importance of bioenergy will increase in all these sectors in the coming decades, as we are globally moving toward an emission-free energy system.

The additional use of forest-based bioenergy has been slowed by a lack of cost competitiveness. Therefore, the supply costs of forest-based biomass need to be reduced, and the security of supply and fuel quality need to be improved. This is possible by developing forest chip supply technologies, business models, and logistical solutions. Resource efficiency throughout the biomass supply chain means lower impacts on the ecosystem and improvement in material efficiency, which can be described as “less is more”. In this way, a supply model with a lower environmental impact can also be more economically viable than before. This Special Issue seeks a comprehensive overview and in-depth technical research papers addressing the progress to improve the cost competitiveness of forest-based bioenergy and its role in increasing the use of bioenergy.





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