

Version OLIVE GREEN

4. CONCLUSION

The techno-economic assessment of jet-fuel production using sugarcane as feedstock and the ATJ technology demonstrated that the greenfield design options are more attractive since the traditional products sugar, ethanol, and electricity have a significant impact on revenues. The base case scenario with ethanol supplied from a second-generation plant presented better economic metrics and a lower risk of having an IRR lower than 12%. Therefore, the use of sugarcane straw to produce jet fuel is a promising opportunity for the aviation industry to face fuel shortages and strict limits on greenhouse gas emissions.

Version PURPLE

4. CONCLUSION

The study has provided a techno-economic assessment of potential ATJ routes using sugarcane as feedstock. The overall results have shown that scenario 2 have greater feasibility potential than the rest of them, mainly due to the higher biojet fuel production associated with the economic performance: low initial investment (brownfield plant) and high return expectation). Despite the high risk in the Monte-Carlo analysis, the project is still best option as 2nd generation of fuels have an ability to provide good unexpected outcomes (environment friendly initiatives). Moreover, is important to point out that different sort of analysis will be certainly inserted in the forthcoming studies, such as environmental life cycle analysis of the scenarios as well as technological risk assessment. Therefore, based on the results we fully believe that such study will be an important reference for decision makers in selecting best alternatives for the promising biojet fuel market.