

# MAURITIUS RESEARCH AND INNOVATION COUNCIL (MRIC)

## COLLABORATIVE RESEARCH AND INNOVATION GRANT SCHEME (CRIGS)

### Project Summary

<b>Title of Project:</b> Arundo Donax a Viable Alternative towards National Clean Energy Development (ADVANCED)	
<b>Local Company:</b> EQUILIBRE Bioenergy Production Ltd	
<b>Main Collaborating Institution:</b> University of Mauritius	
<b>Project Leader:</b> Mr Laurent de Morelos, EQUILIBRE Bioenergy Production Ltd	
<b>Research Collaborator(s)</b>	
<b>Name</b>	<b>Organisation</b>
Dr Vikram Seebaluck	University of Mauritius
<b>Technical Abstract</b>	
<p>Equilibre Bioenergy Production Ltd (EPBL) intends to cultivate Arundo Donax biomass on around 2200-2800 hectares of land (~2.5% of total agricultural land in Mauritius) to produce adequate biomass for the construction of a first 30 MW installed capacity dedicated biomass power plant, a pioneer one based on Arundo Donax biomass, to export around 200 GWh of firm/base load electricity annually. Alternative, the biomass produced can be equally co-combusted in existing 'bagasse cum coal' or coal power plants as a complementary fuel to bagasse or substitute for imported sub-bituminous coal in Mauritius.</p> <p>Arundo Donax crop cultivation has been undertaken by EBPL in several locations in Mauritius since 2012 and in 2016 a new improved variety 'Arundo Donax K12' imported from Honduras is grown which is expected to have better agricultural yield amongst many other benefits. In this context, EPBL seeks the CRIGS to support this bioenergy project extending from agricultural production, development of appropriate supply chain options, to electricity production in existing power plants or dedicated biomass power plants. The project is comprised of multiple benefits namely contribution to agricultural development, sustainable energy production and energy security, environmental/climate mitigation through CO2 abatement and coal replacement, support to the dwindling sugarcane industry in particular to the small planters, improvement in land use following the abandonment of around 17,000 hectares of sugarcane lands so far, and many other socio-economic developments such as job creation and reduction in energy budget expenditure.</p>	
<b>Key Words:</b> Arundo Donax Bioenergy Crop, Commercial Agricultural Production, Supply Chain development, Industrial Processing, Electricity Generation, Sustainable Development	