



Project information

Project name	Biofuel Power Generation from Jatropha (concept)
Country	Philippines, Northern Luzon, Region 2
Project background	<p>The project is comprised of: a 2,000 hectare Jatropha plantation (including nursery & propagation area); a mill for extracting crude vegetable oil (CVO); and a power generation facility utilizing the CVO. Revenues will come from sale of power to the grid or the local community, carbon credits from offsetting fossil fuels power, and sales of the biomass residues.</p> <p>The Regional Development Council approved the 'Cagayan Valley Jatropha Industry Framework Plan 2008-2030' in 2008. This plan lays out the basic foundation for biofuel development in the region.</p>
Project type	Renewable energy
Project scope	<p>Plantation size: 2,000 hectares</p> <p>CapEx estimate: plantation \$2.1 million; seed press (cost depends on type, source & size); CVO power plant (cost depends on type, source & size)</p>
Funding method	A mix of project finance (debt) and equity (joint venture partners)
Project period	3 years until plantation yields fruit; 10 years thereafter for carbon credits (CERs); up to 50 years for CVO; ca. 30 years for CVO power plant
Project details	<p>A well-conceived 2,000 hectare Jatropha plantation has the potential to yield ca. 13t seed per hectare per year. This can generate ca. 9,400t CVO per year and 17,400t biomass residue (seedcake) per year. Estimates show that:</p> <ul style="list-style-type: none">• 9,400t CVO is enough to power a ca. 7MW liquid biofuel power plant;• 17,400t seedcake is enough to power a ca. 4MW biomass power plant. <p>Such a project has significant social and environmental benefits as well as potential for decentralized, renewable energy.</p> <p>As this is a concept project, that has wide replicability potential in the Philippines and elsewhere, a feasibility study needs to be undertaken as the agronomical, energy, technical and economic conditions should be closely examined as a first step. Thereafter, a business plan should be prepared that will determine the financial and operational details as well as the business structure of a joint venture. Following that, a pilot plantation of 2,000 hectares will help to fine tune the details of a business model that has huge potential for poverty alleviation, energy independence, switching away from fossil fuel, and reducing human impact on the climate to name just a few of the benefits.</p>