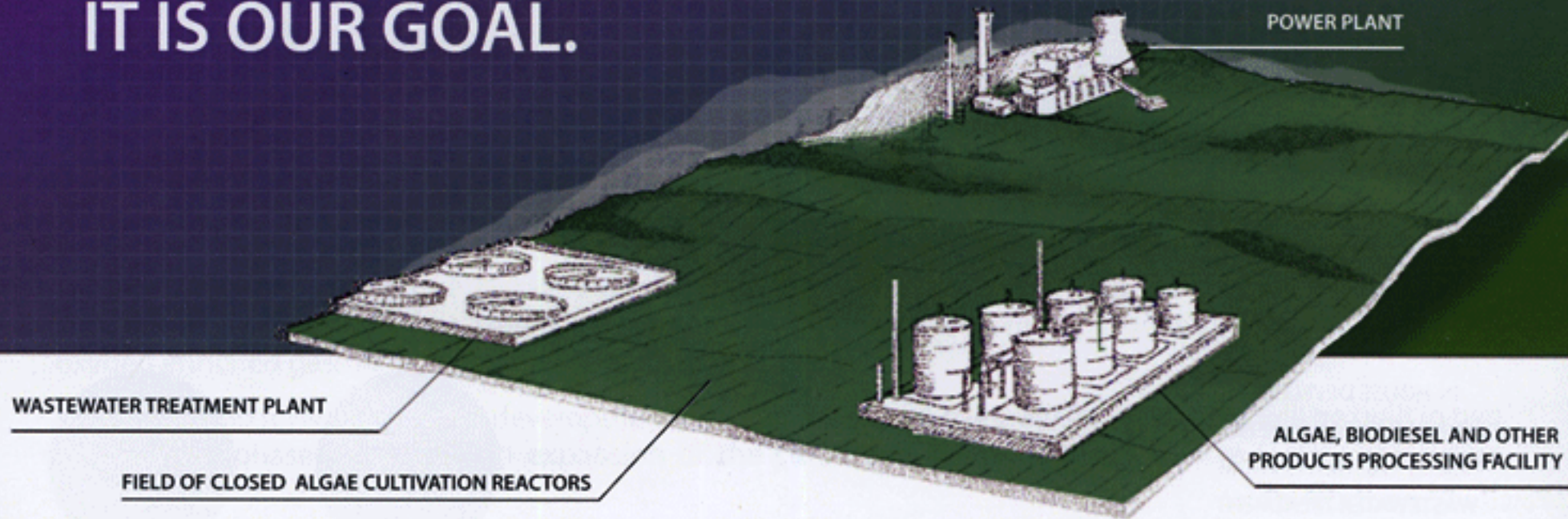




# AFS BioOil

Algae Biodiesel. Local Fuel™

1 BILLION GALLONS OF LOW-COST BIODIESEL  
IS NOT JUST AN IDEA.  
IT IS OUR GOAL.



## Our Strategy

AFS BioOil Co. offers a unique approach to production of low cost algae biodiesel.

Our plants produce locally grown biofuels creating environmental and economic benefits for local communities. They lead the country to energy independence and create jobs.

Our plants cultivate microalgae and convert the biomass into biodiesel and other co-products.

Our goal is to build 100 vertically integrated plants in the next 10-15 years. This is an equivalent of producing 1 billion gallons of biodiesel per year.

## AFS BioOil Plant

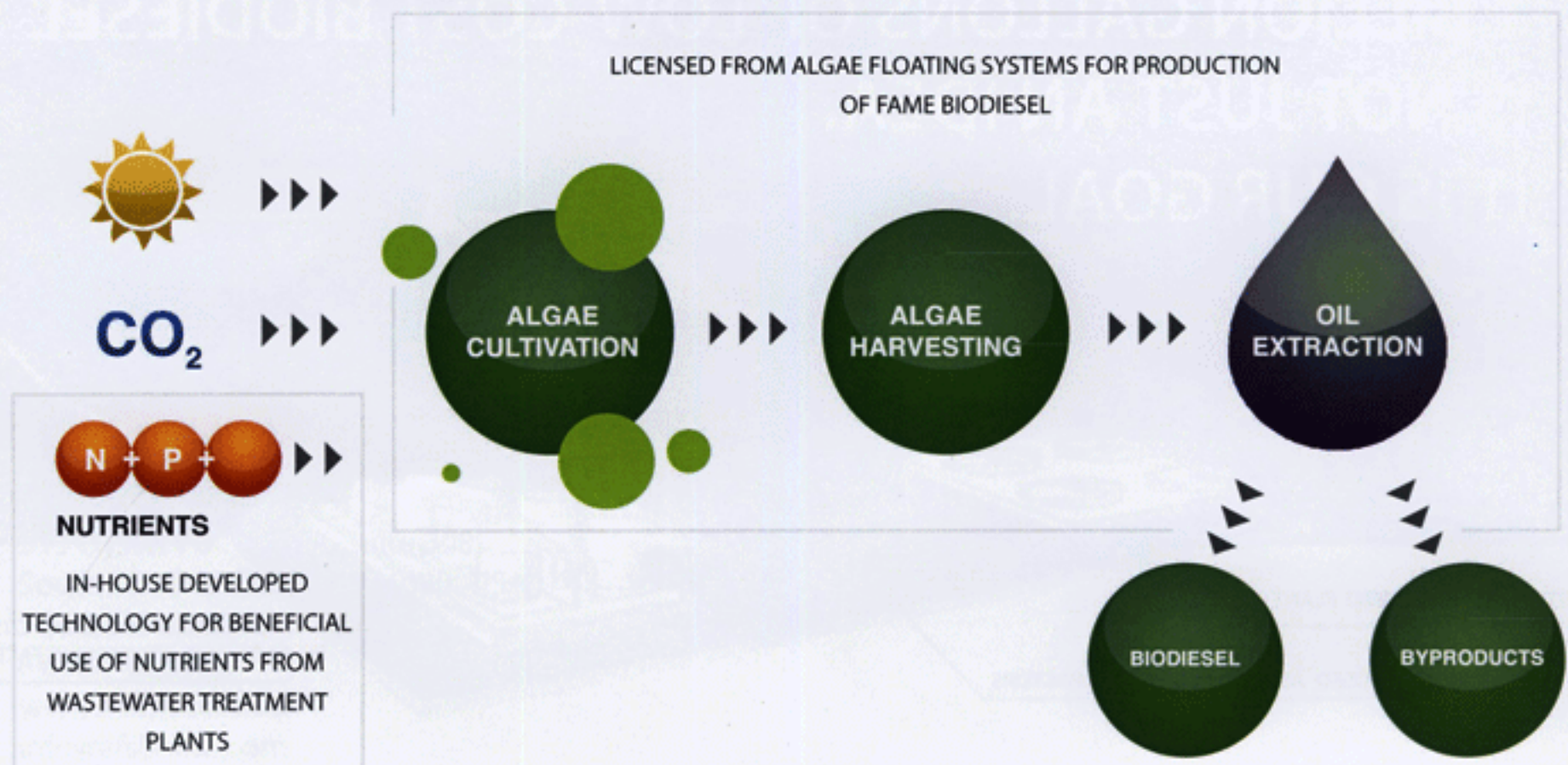
Our standard commercial plant with ethanol as a co-product has the following technical and financial highlights:

\* Biodiesel and ethanol in this case are priced at 3 USD per gallon; additional income can be generated from CO<sub>2</sub> utilization; other higher margin co-products are also possible.

Note: To increase profitability and biofuels production per acre of occupied land, our plant could be integrated with fermentation and waste heat-to-electricity systems.

Footprint	500 acres
Biomass produced	136,000 metric tons per year
CO <sub>2</sub> utilized	250,000 metric tons per year
Capital cost including land	154,000,000 USD
Products	
Biodiesel (FAME)	10,000,000 gallons per year
Ethanol	8,000,000 gallons per year
Revenue	54,000,000 USD per year *
Expenses	(15,050,000) USD per year
EBITDA	38,950,000 USD per year
Construction period	1.5 years
Simple payback period	4 years
Simple payback period including construction period	5.5 years
Plant life	15 years

## Technology



Our technology integrates algae cultivation systems with wastewater treatment plants. This approach is beneficial for the wastewater treatment community, as well as algae producers, as such integration reduces operating costs for both partners.

Our plant incorporates several key technologies:

- Proprietary nutrient supply system that minimizes nutrients costs
- Proprietary photobioreactor that minimizes microalgae cultivation costs and optimizes land use
- Harvesting system that significantly reduces electricity use
- Unique wet biomass algae oil extraction system that bypasses costly drying

### **Feasible, Scalable, Sustainable**

A full scale commercial module is operating in California at a wastewater treatment plant. It has proved technical and economic feasibility of future commercial systems.



**AFS BioOil Commercial  
Module in California**

At the current stage we operate one of the biggest closed algae cultivation reactors. Its volume is 150m<sup>3</sup> and is designed to produce 150 kg of biomass per day. We are able to produce algae through photosynthesis in a scalable and cost efficient manner because our system enables us to cultivate microalgae at higher than usual densities, and unlike "open ponds", allows us to tightly control key cultivation parameters. The technology is designed to be installed on non-arable lands and can work for different algae strains and different operating conditions. The bioreactors are designed with options to produce clean water and collect oxygen enriched gas.

We are moving forward with the development of our first 500 acre commercial facility that will be built in two phases with phase one being an expansion of the current 2-acre facility into 10-acre facility and future development of all 500 acres.

**AFS BioOil Co.**

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