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 DATE: 10/12/2017  
 PROJECT: Private Client/ CA  
 PROJECT #:

50,000 sq. ft. Cannabis Greenhouse Cultivation Site: HPS vs. LED

**Lighting System Data**

**HPS Sytem**

**Grow Ray LED**

Quantity of Fixtures	1,600	1,600
Lighting System	HPS	LED
Fixture Wattage	1,180	690
Lamp/Module Life, Rated Hours	10,000	80,000
Per Lamp/Module Cost	\$500	\$1,099
Per Lamp/Module Re-lamping Cost (per fixture, per year)	\$35	\$0
Adaptive kW Reduction via Patented Adaptive Controls		25%

**System Operating Data & Costs**

**Average kWh Cost—>**

\$0.12

Operating Hours per Year (Existing vs modified proposed with Adaptive Sensor)		1,950	1,463
Total Wattage / Total System	1,888,000	1,104,000	
Total Kilowatts / Total System	1,888	1,104	
Total Kilowatt Hours / Total System	3,681,600	1,614,600	
Annual Energy Costs	\$441,792	\$193,752	
Annual Lamp/Module Maintenance Costs (Based on Life Cycle in Years)	\$208,650	\$40,182	
Annual Operating Costs	\$650,442.00	\$233,934.19	

**Project Implementation Costs**

Fixture Sell Price		\$1,395
Fixture Installation Sell Price		\$0
Recycling & Disposal Sell Price		\$0
Total Project Sell Price (Invoice Amount to Customer)		\$2,230,400
Rebate (Custom - based on kWh saved)	0.05	TBD
Rebate (Prescriptive - per unit price)	100.00	\$250.00
Total Project Cost after Rebates		\$1,830,400



# SUMMARY

Annual Energy Savings from Project

\$248,040

Annual Maintenance Savings

\$168,468

Simple Payback in Years (w/ 5% increase in DWY)

**.79 Years**

Life Cycle Savings based on

Calculation Years

\$6,247,617

Life Cycle CO2 Emissions Reduction based on Calculation  
Years\*

16169.11 tons

