**Geowarmth Poultry Solutions**, LLC.

Executive Summary

**About Us**

**Business Description**

GeoWarmth Poultry Solutions provides a ground-source heating system for broiler chicken farms. Propane and natural gas are the industry standard for heating, but the amount of gas required to maintain consistent temperatures results in high energy costs and an unhealthy environment for birds. Our service consists of consulting, planning, digging, and installing our product.

**Problem**

Over 39% of poultry farmers' yearly operating costs are associated with maintaining the temperature of their chicken houses. Additionally, propane heating systems require intricate ventilation systems to prevent chicken fatalities due to poor air quality (which aren’t always effective). The burning of propane gas also contributes to climate change, as 360 million tons of greenhouse gases are produced each year by the poultry industry.

**Solution**

Geowarmth Poultry Solutions aims to alleviate the high yearly costs of maintaining temperatures by offering a low impact and low annual cost alternative. GPS offers consultation, manufacturing and installation of a ground source heating system custom fit for the needs of each farmer.

**Competitive Advantage**

GeoWarmth Poultry Solutions' competitive advantage is our differentiation within the U.S. poultry market by emphasizing sustainability and long-term cost savings for farmers. Our product excellence derives from our innovative and customizable technology that is both efficient and reliable for customers. This is achieved through thorough consultation and engineering to fit the consumer’s needs.

**Technologies/Special Know-how**

Introducing geothermal technologies to the poultry industry is untapped in terms of potential. This gives us a competitive edge and early foot in the door. Our knowledge in both the geothermal and poultry industries enables us to secure an advantage over our competitors.

**Market Analysis**

Our target market is small-to medium-sized poultry farms across 13 states. These 13 have been grouped into 2 main segments based on geographical location. The Southcentral and Great Lakes regions. Southcentral has about 370% larger market size along with a slightly higher growth rate, when compared to Great Lake States.

**Finances**

**Amount of Financing Sought:**

$323,098 SBA loan at 11.5% interest per year for 10 years, owner's equity contribution of $1,275,000.

**Liquidity:**

The company's liquidity, as measured by the current, quick, and operating cycle ratios, has shown consistent improvement over the years, overall surpassing the industry averages. The operating cycle is in line with industry averages. This suggests strong short-term financial health and improved liquidity management.

**Financial leverage:**

The debt/equity ratio that increases drastically by year five (67.54) is reasonable given that we reach a positive owners’ equity that year. The TIE ratio steadily increases over the five years and surpasses the industry average by year five (3.84 vs Industry Avg. 2.70). This decreases risk for our company overall giving us a strong ability to pay off our debts.

**Asset management:**

Our company has a low Inventory Turnover ratio (15.56 by year 5). The materials inventory for our product is expensive and our company is maintaining reserve inventory to keep up with fluctuations in demand. Our companies’ receivables turnover is lower than industry average due to the high price of our product (14.87 by year 5). High costs for consumers result in our allowance of 2 months for customers to pay their outstanding balance.

**Profitability:**

Despite fluctuating margins, the company has generally maintained profitability trends above the industry average. The improvement in gross profit margin over the years indicates better cost management. The operating profit margin, though volatile, shows an upward trend, reflecting improved operational efficiency. The return on assets (ROA) turned positive from negative values, signaling a shift towards profitability and better utilization of assets to generate earnings.

**DuPont Analysis:**

## Our net profit margin is considerably smaller than the industry average in years 1 through 3, then becomes positive in year 4 and is only 4 percent behind the industry average in year 5. The total asset turnover starts below the industry average but moves above the industry average for years 2,3 and 5. Our total asset turnover ratio dropped to 0.06 in year 4 because we have a higher interest rate. Our equity multiplier is below the industry average for the first 4 years of operation, then jumps above the industry average by 78. This analysis suggests that the company has shown strengths in liquidity management, efficient asset utilization, and improved profitability over the years. However, the fluctuating leverage ratios and ROE indicate a need for more consistent financial structuring to ensure stable returns for investors.

