IPRO 317
Nana: A Sustainable Restaurant

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Mission Statement

• Vision is to market and advertise effectively and innovatively within at least a 1 mile radius of Nana increasing awareness to the general public, become environmentally friendly and eventually significantly increasing the number of customers to enjoy the distinct Nana organic experience
Business Subgroup

• Goals/Objectives
  – Engage Local Community
  – Advertise/Market
  – Implement constructive feedback
  – Dinner Expansion Issues
  – Financial Analysis Expansions
  – Research for potential funding
Advertise/Market

- Radio Advertising
- Online Advertising
- Newspaper Advertising
- IIT Campus Events
- Demographics
Engage Local Community

• Demographics (Bridgeport; 2000 Census)
  - Total Population - 92,472
    • Hispanic (60%)
    • White (35%)
    • Other (5%)
  – Median Age - 27.2
Advertise/Market
Advertise/Market

• Student Coupon

**Student Coupon − 15% Off!**

Come to Nana on 33rd and Halsted for
15% off a breakfast or lunch item!
See menu and other information at
nanaorganic.com
Please have student ID present
Valid only on Mondays and Tuesdays
Expires 3/30/2010
Feedback: Areas To Improve

• Time to wait for table
• Time to wait for food
• Unable to accommodate large crowds
• Mediocre food
• Over priced for extremely SMALL portions
  – Both juices and meals

http://chicago.metromix.com/restaurants/american/nana-bridgeport-sox/814747/content
Environmental Subgroup

WVO- waste vegetable oil

- Process:
  - WVO must be settled (1-2 weeks)
  - Processed to remove contaminants.
  - Vehicle must be converted in order to properly burn WVO. (conversion kit)
Elsbett 1 tank system vs. 2 tank system

1 Tank system:
- Utilizes 1 fuel tank
- Can operate on just WVO
- During sub-zero months regular diesel fuel may be necessary. (not in subject vehicle)

2 Tank system:
- Switches between diesel tank and WVO tank
- Necessary during long periods of engine Idling
Subject Vehicle: 2010 Volkswagen Jetta Wagon, TDI

- 14.5 Gallon Fuel Tank, Automatic Transmission

- Economy 2010 VW Jetta: 30 MPG-City, 42 MPG-Highway, 34 MPG-Combined

- Local Diesel Fuel Price (2-17-10, 3400 Milwaukee Ave, Gas Depot): $2.89/gallon

### UPFRONT COSTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conversion Kit</td>
<td>$1,000</td>
</tr>
<tr>
<td>Install (8hrs at $95)</td>
<td>$760</td>
</tr>
<tr>
<td>Filtration (drum/unit)</td>
<td>$240</td>
</tr>
<tr>
<td><strong>TOTAL UPFRONT COST</strong></td>
<td><strong>$1,990</strong></td>
</tr>
</tbody>
</table>

5% Contingency $99.50

**TOTAL WITH CONTINGENCY $2,089.50**

### TIME OF REPAYMENT

- Gallons of Diesel Fuel Used Weekly 14.5gal
- 14.5 gallons at $2.89 $41.91
- Savings after 50 weeks (RE-PAID) $2,095.50
- Savings- YEAR 1 (52 weeks) $90.11
- Savings- YEAR 2 (104 weeks) $2,095.50
Composting and Rain Catching
Building Subgroup

- Wind Turbine / Solar Panel
- Green Wall Insulation
- Shading / Outdoor Cafe
Solar panel system/ Wind turbine

Cost, debate, and breakeven time with 50% electricity offset when 90 kWh usage per month

System Specifications
Solar Radiance: 4.47 kWh/sq m/day
Avg. Monthly Usage: 90 kWh/month
System Size: 0.42 kW
Roof Size: 41 sq ft
Estimated Cost: $3,345.22

Incentives
Federal Incentives Tax Credit: 30%

Savings
Estimated Cost: $3,345.22
25 Year Savings: $1,943.03
Break Even: 25.34 years

Rotor Diameter: 0.60 metres (0 to 150m).
Mean Wind Speed: 4.6 metres per second (0 to 12m/s).
Cut-in Speed: 1.5 metres per second (0 to 7m/s).
Cut-out Speed: 25 metres per second (10 to 25m/s).
Turbine Efficiency: 41 percent (10 to 59%).
Weibull Shape Parameter: 2 (1-3, so use 2 if unsure)

Predicted Turbine Output: 119 kWh
Green wall insulation system

Tournesol VGM Modular Living Wall System

- The superior solution for exterior living walls.
- VGM system's intensive soil volume creates spectacular visual impact, the hanging mechanism makes maintenance and change a snap.
- Cost Estimation ($100~150 per 1ft²)
Shading system for Cafe

Operable Shading system
Out door Café system
Nana Website

http://www.nanaorganic.com/