

**COMMISSION ON ENERGY &  
ENVIRONMENT  
OCTOBER 14, 2008**

**VIRGINIA BIODIESEL REFINERY, LLC.  
DENNIS J. SULICK  
GENERAL MANAGER**

# **COMMISSION ON ENERGY & ENVIRONMENT**

## **OCTOBER 14, 2008**

- **Biodiesel and the Virginia Energy Plan**
  - **Background on Biodiesel**
    - 2007 National Producers
    - 2007 Virginia Producers
  - **What is biodiesel**
  - **Benefits of Biodiesel**
  - **Virginia Energy Plan Requirements**
    - State Government Usages
    - Production Incentives
    - BioHeat Incentives
    - School Bus Programs
  - **Virginia Tech Extension Study**

# **COMMISSION ON ENERGY & ENVIRONMENT**

## **OCTOBER 14, 2008**

- **What is Biodiesel**
  - **Renewable diesel replacement fuel**
  - **Replaces imported crude oils**
  - **Made from Domestic Feed stocks**
    - **Vegetable oils, rendered animal fats, WVO, any feed stock containing triglycerides**
    - **Reacted with methanol and caustic catalysts**
  - **Product that meets ASTM Specifications**
  - **Expands refining capacities in country**

# **COMMISSION ON ENERGY & ENVIRONMENT**

## **OCTOBER 14, 2008**

- **Benefits of Biodiesel**
  - Renewable fuel.
  - Made from Domestic feed stocks. No imports.
  - Non-Toxic
  - Biodegradable
  - Drop-In Technology
  - 30-40% less Carbon Dioxide
  - 20-30 % less Particulates
  - 15-25% Less Unburned Hydrocarbons
  - Virtually no Sulfur
  - 20% Higher Cetane Numbers

# **COMMISSION ON ENERGY & ENVIRONMENT**

## **OCTOBER 14, 2008**

- **Benefits of Biodiesel**
  - **High energy Out-Put Versus Inputs**
    - Biodiesel    1.10-1.20 Ratio
    - Ethanol       0.80-0.90 Ratio
  - **Only Renewable fuel to pass the Tier I and Tier II Health Effects studies**
  - **DOE Study through University of Idaho reduces air toxics 20-40%**
  - **Dept. of Labor Mining Safety Health Administration approved biodiesel in underground mining equipment**

# **COMMISSION ON ENERGY & ENVIRONMENT**

## **OCTOBER 14, 2008**

- **Industry Background National Level**
  - **Growing Industry**
    - 2005    75 Million Gallons
    - 2006    250 Million Gallons
    - 2007    420 Million Gallons
  - **Growing Industry**
    - **In 2007, 171 refineries**
      - Nameplate capacities   2.24 Billion Gallons
      - 420 Million Gallons sold
      - 19% Industry Utilization
      - Approx 28 new plants on drawing boards

# **COMMISSION ON ENERGY & ENVIRONMENT**

## **OCTOBER 14, 2008**

- **Biodiesel Industry in Virginia**
  - Virginia Biodiesel Refinery, West Point, Va.
  - RECO Biodiesel, Richmond, Va.
  - Chesapeake Custom Chemical, Martinsburg, Va.
  - RENRO Biodiesel, Chesapeake, Va. (Closed)
  - Red Birch Biodiesel, Roanoke area (Pilot)
- **Nameplate Capacities**
  - 20-30 million gallons/year
  - Utilization for state of Virginia 8-10%

# **COMMISSION ON ENERGY & ENVIRONMENT**

## **OCTOBER 14, 2008**

- **Virginia Energy Policy with respect to renewable fuels**
  - **Contains verbiage: “...endorse,....support,....may,  
.... Should, ...promote, ...encourage**
  - **Message and related usage within the state does not reflect a leadership position**
  - **State agencies uses little if any biodiesel**
  - **Many states have taken a proactive leadership role in requiring biofuels in their respective state agencies**
    - **Penna., N. Carolina, Maryland, Massachusetts examples**



# **COMMISSION ON ENERGY & ENVIRONMENT**

## **OCTOBER 14, 2008**

- **Virginia Energy Policy Needs to adopt stronger verbiage to Require:**
  - **State Government Use**
    - **Fleets and service vehicles**
    - **Government building heating oils throughout the state**
  - **Diesel fuels sold in the state to contain 5% biodiesel and ramp up as in other states**
  - **Heating oils sold in the state to contain 5% biodiesel**

# **COMMISSION ON ENERGY & ENVIRONMENT**

## **OCTOBER 14, 2008**

- **Virginia Energy Policy Needs to adopt stronger verbiage to Require:**
  - **School Bus Use Incentives**
  - **Producer Incentives similar to states surrounding Virginia**

# **COMMISSION ON ENERGY & ENVIRONMENT**

## **OCTOBER 14, 2008**

- **Virginia Tech Extension Study 2007**
  - **“For every dollar spent on petroleum diesel, only \$0.134 stays in Virginia”**
  - **“For every dollar spent on biodiesel, approximately \$0.90 stays in Virginia.”**
  - **“For every Million dollars spent on biodiesel, it creates \$2-3 Million in economic activity in Virginia”**

**COMMISSION ON ENERGY &  
ENVIRONMENT  
OCTOBER 14, 2008**

**VIRGINIA BIODIESEL REFINERY, LLC.  
DENNIS J. SULICK  
GENERAL MANAGER**