

Kentucky Department of Agriculture

Motor Fuel and Pesticide
Testing Laboratory

Introduction

- Biomass and other alternative forms of energy are important part of current and future energy
- Fossil energy will remain dominant many years
- Regulatory agencies must focus on all for consumer protection
- Kentucky's motor fuel law mandates that Ky. Dept. of Agriculture regulate all motor fuels; pesticides law requires regulation of all pesticides to protect consumers & environment
- Guiding principles in planning our laboratory
- This presentation focuses on motor fuel testing

Goals

- Consumer protection
- Ensure Kentucky fuels are of the highest quality
- Aid in the emergence of alternative fuels
- Promote Kentucky renewable energy
- National leadership in fuel and pesticide testing



Consumer Protection Mandate

- All Kentucky motor fuels must conform to ASTM (American Society for Testing and Materials) standards. KRS 363.900-908
- Increased testing to ensure quality motor fuels
- Fast regulatory action to contain bad fuels
- Quality control for the emerging renewable fuels industry

Fuel Testing Environment

- Kentucky consumers purchased more than 3.4 billion gallons of motor fuel in FY 2007 with a retail value $>$ \$12.5 billion
- In the past, 500 gasoline and 100 diesel samples tested annually (0.0000176% of supply) at a cost of about \$200,000
- Fuel failure rate of about 9% of 600 samples

Laboratory completed April 24, 2008



Production Projections

- Kentucky sample testing to officially begin July 1, 2008, 10,000 gasoline samples analyzed the first fiscal year (\$1,960,000 commercial value)
- Kentucky diesel testing to officially begin October 1, 2008—5,000 samples the first fiscal year (\$980,000 commercial value)
- Contract testing available to interested parties—gasoline January 1, 2009; diesel March 1, 2009
- Other testing to come online in the near future—bio-diesel, ethanol, automotive products, propane, hydrogen fuel cells

Fuel Testing Laboratories

10,640 square feet



State-of-the-art Systems

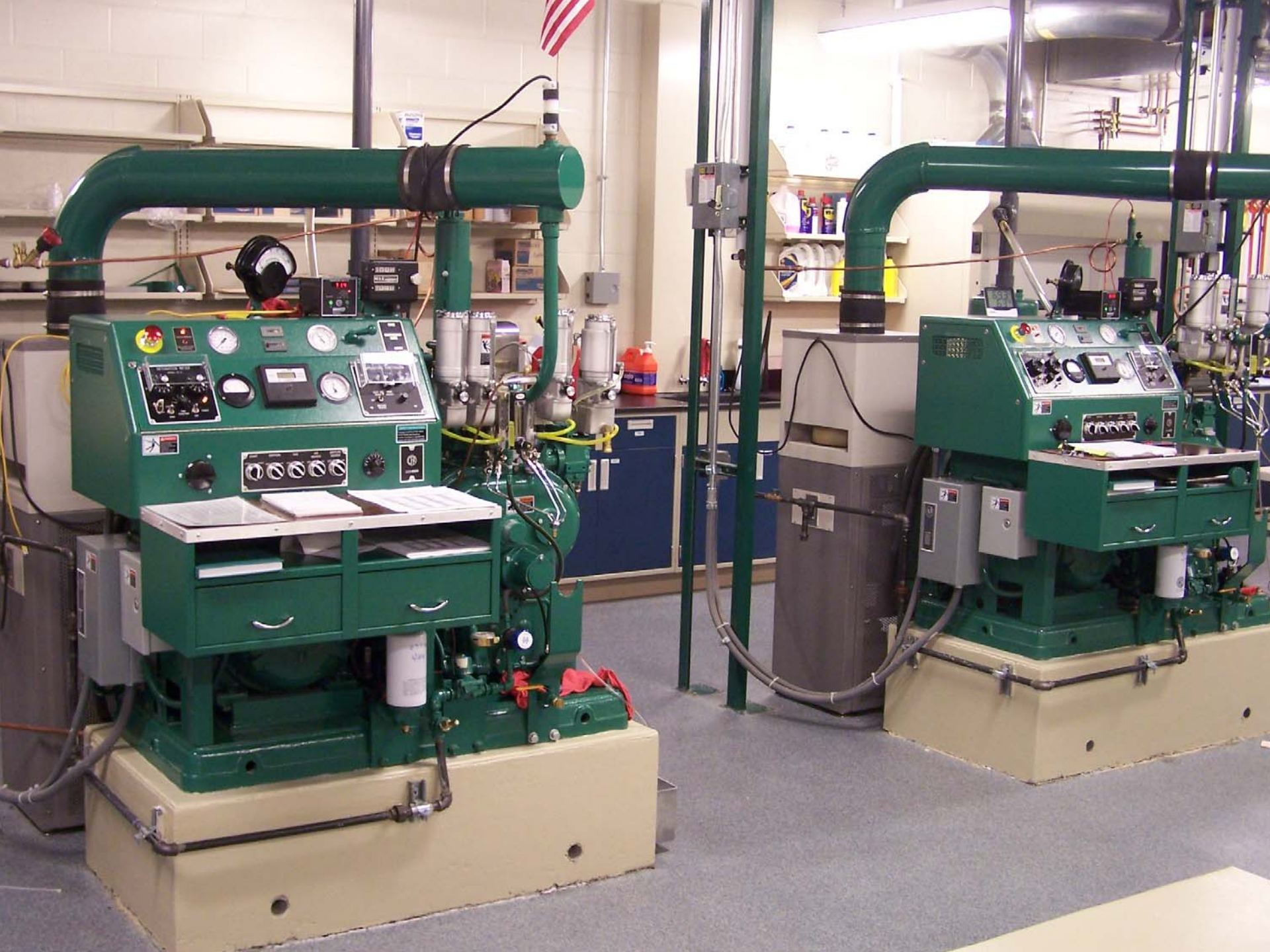


State-of-the-art Technologies









On-site Fuel Storage Capability

Logistics and Transport



Alternative and Emerging Fuels

- Ethanol
- Bio-Diesel
- Hydrogen Fuel Cell



Pesticide Analyses



Quality Control and National Recognition

- Advanced internal quality control through participation in ISO quality assurance program.
- Participation in ASTM international petroleum subcommittees and ASTM inter-laboratory cross-check programs
- Cooperative participation with the National Institute of Standards and Technology (NIST) and regional refineries

Summary of Benefits

- Exponential increase in fuel quality and pesticides testing from past status
- Increased consumer and environmental protection
- Rapid response to regulatory violations
- Value to taxpayers and Commonwealth
- Revenue stream for Department
- Quality control