



*ASEAN – U.S. Enhanced Partnership
Biofuels and the Automotive Industry Seminar*

Outline of Biofuels Development in Vietnam

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Fuel Consumption (Imported), 2000-2006

Units: 1,000 Tons

Years	2000	2001	2002	2003	2004	2005	2006
Total	8747.3	9083.0	9970.5	9936.4	11047.8	11477.7	11212.7
<u>In which :</u>							
Gasoline	1480.1	1731.7	2098.3	2180.3	2604.4	2630.1	2849.4
Diesel	4133.2	4079.7	4434.3	4650.3	5479.6	5891.1	5663.0
LO	2367.6	2365.9	2582.3	2376.5	2117.9	2199.5	2013.4
Kerosene	387.7	524.8	424.6	418.5	358.2	332.9	229.5
Avian		225.4	259.7	335.1	310.9	425.8	424.2
489.0							

ULG Specifications

Gasoline Property	Specs.
RON	90/92/95
Sulfur, ppm, max	500
Lead, g/l, max	0.013
Metal Content, mg/l max	5

Diesel Specifications

Diesel Property	Specs.
Sulfur, ppm,max	500
Cetane ,min	46
Density, kg/cm³, 15⁰C	820-860

Automotive : Vehicle Fleet, 12/2006

- Motorcycle: 20-21 mill.
- Cars: 800.000
- Annual growth rate: 15%- 17%
- Motorcycle production & assembled in Vietnam: 2.5 Mill./Year
- No 2-stroke engines.

Transportation

- Private Motorcycles : Too much
- Traffic jam: Dangerous
- Hanoi & HCMC : Everywhere, everyday
- Polluted. Emitted
- Fuel Monitoring systems
- Environment Control
- &

Automotive :Emission Standards

- PM's Decision 249/2005: Euro-2 from July 01, 2007 for all kind of motor vehicle
- Emission testing labo under Construction
- Phasing out old passenger cars, trucks, taxi.
- National Urban Air Improvement in Major Cities in VN Prog. (*Alternative Fuel Project*).
- Emission charges and fees developing

Biofuels Standards

- Draft I : Developing.
- Approach: Similar to EN 14214 & ASTM D 6751
- Comments & Considering
- Completion: Estimated I Quarter, 2008

Biofuels Development

Private Co. of the Mekong River Delta

From Cat Fish Fat :

- VAMCO Biochemical Co.: 100 T/day,
- Thien An Co. : 105,000 T/year: B 10.
Estimated fat collected : 10,000 T/year
- Saigon Petro: Gasohol (E 5, & E 10): Labo

Biofuels Development (cont.)

R & D Institutes:

- Institute of Material Research HCMC : From seeds of Rubber tree : Labo,
- HCMC University of Tech.: From wasted cooking Oil : Labo ,
- Additive and Petroleum Products (APP): B10.

Biofuels Development (cont.)

Sources Material Development:

- Bioacohol Co.Ltd : Industrial Alcohol Factory: 60,000 m³/y, 4,000 ha Farm Tiboca tree. (Daklak Prov.)
- Dept.of Agriculture & Rural Development: 5,000 ha Farm of Jatropha Curcas L. tree: For the material supply purpose (Binh Thuan Biofuels.).
- Others: Seeds of Cotton tree,...

Biofuels Challenges

- National Biodiesel Strategy: No
- Draft Biofuels Development Project for VN: (By Group of Experts, MoI): Not completed
- Standards & Specs.: Not
- Sources of Material : No Planing & unclear
- Domestic Investment: High risk

Biofuels Challenges (Cont.)

- Technical issues : (Certification, Monitoring & Control, Distribution...): No
- R & D : Very small + Research in Labo + Self-Research + Pilot Stage
- Policy : Tax, Incentive: No
- Awareness: No
- International Assistance: No

Thank you!

