

# *The Philippine* **ALTERNATIVE FUELS PROGRAM**



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# OUTLINE



## Introduction

- **Alternative Fuels Program Framework**

## Alternative Fuels Program

- **Natural Gas Vehicle Program for Public Transport (NGVPPT)**
- **Autogas (LPG)**
- **Coco-Biodiesel**



# ALTERNATIVE FUELS PROGRAM FRAMEWORK



## Alternative Fuels and Energy Technology Program

### POLICY / PLAN FORMULATION

- feasibility studies
- market surveys/  
characterization (establish  
baseline)
- policy papers/framework
- legislations/directives  
(memo circular, E.O.)
- standards formulation
- Incentive packages
- certification/accreditation  
program
- research & development

### TECHNOLOGY and INFRASTRUCTURE

- refueling / refilling stations
- supply / distribution network
- alternative fuel production  
(biofuels)
- engine system conversions,  
OEM acquisition
- power/non-power applications  
(on/off grid, industrial,  
commercial, residential,  
transport)
- pilot tests/showcase projects

### INFORMATION, EDUCATION, AND COMMUNICATION (IEC)

- manpower development,  
exhibits, demonstrations,  
seminars/workshops/  
conferences, tri-media info  
program, handouts, DOE  
website access:
- general technology updates
- conversion technologies
- fabrication, installation,  
operation, maintenance, and  
safety



# ALTERNATIVE FUELS PROGRAM



“To achieve energy supply security, fuel diversification, reliability and affordability while meeting environmental challenges through the utilization of alternative fuels”



**Coco-methyl Ester (CME)  
or Coco-Biodiesel**



**Natural Gas**



**Autogas  
(Liquefied Petroleum Gas)**



**Others  
i.e. fuel cells**



# NATURAL GAS



## BENEFITS

- **Indigenous**
- **Reduces dependence on imported fuel**
- **Cleaner burning than gasoline or diesel**



# **NATURAL GAS**



## **INITIATIVES**

- **Signing E.O. 290 Implementing the Natural Gas Vehicle Program for Public Transport (NGVPPT)**
- **Accreditation of participants to the NGVPPT**
- **Development of incentives and affordable and commercially tenable financing packages to encourage investments**
- **Establishment gas supply infrastructure**
- **Demonstration of NGVs**



# **NATURAL GAS**



## **INITIATIVES**

- **Adoption of 48 Philippine National Standards for natural gas utilization in transport**
- **Pursuit of international cooperation to ensure success of the program**
- **Local capacity building through seminars and workshops**
- **Public awareness through exhibits and forums**



# **NATURAL GAS**



## **NEXT STEPS**

- **Implementation of CNG Masterplan**
- **Deliberation on additional standards and creation of certification body**
- **Groundbreaking Ceremony of the First CNG Mother Station**





# NATURAL GAS



## NEXT STEPS

- Posting of enhanced NGVPPT web page at the DOE website (by May 2004): [www.doe.gov.ph](http://www.doe.gov.ph)
- Mandate for government agencies to include NGVs in vehicle procurement



# **AUTOGAS**



## **BENEFITS**

- **Cleaner burning than gasoline and diesel**
- **Proven technology**
- **Available infrastructure**
- **Less up front cost for conversion and construction of refueling stations than CNG**



# **AUTOGAS**



## **INITIATIVES**

- **Clean Alternative Transport Fuel Financing Program for autogas projects**
- **Inclusion of Autogas in the 2004 Investment Priorities Plan**
- **Draft standards for autogas cylinders, autogas vehicles and autogas dispensing stations**
- **The Petron Station in Valle Verde, Pasig City operates the first publicly available autogas dispensing station**



# **AUTOGAS**



## **NEXT STEPS**

- **Enhancement of the incentives package for autogas**
- **Adoption of autogas standards**
- **Capacity building**
- **Public awareness campaign**



# **COCO-BIODIESEL**



## **BENEFITS**

- **Indigenous**
- **Renewable**
- **Reduces dependence on imported fuel**
- **Supports government's poverty alleviation program**



# **Coco-BIODIESEL**



## **INITIATIVES**

- **Mandated the use of 1% Coco-Biodiesel in all government diesel vehicles (M.C. 55)**
- **Developed and adopted standards for pure Coco-Biodiesel**
- **Conducted engine performance and emission tests on 1% Coco-biodiesel blend**
- **Conduct of public awareness activities**



# COCO-BIODIESEL



## NEXT STEPS

- **Implement M.C. 55**
- **Conduct additional tests on Coco-Biodiesel, particularly engine performance, emissions, safety**
- **Conduct tests on the quality and shelf-life of Coco-Biodiesel blends**
- **Implement the use of a 5% Coco-Biodiesel blend nationwide**



# THE RP EXPERIENCE



## Issues/Barriers

**Policy**

**Infrastructure Development**

**Market acceptability**

**Financial support**

**Manpower capability**

## Strategies

- Issuance of relevant laws, directives, orders, etc.

- Cooperative arrangement with stakeholders to ensure stable supply and competitive prices

- Standards development
- Continuing tests

- Provision of incentives
- Affordable and commercially tenable financial packages

- Development and implementation of training courses





# LESSONS LEARNED



## Policy

- Open and continuing dialogue within government and between government and the energy sector in developing policies on alternative fuels is essential
- Appropriate pricing and taxation policies need to be developed for alternative fuels to be competitive in the market place

## Infrastructure Development

- Partnerships with stakeholders ensures reliable supply



# LESSONS LEARNED



## Market Acceptability/Sustainability

- **Government issuances promoting alternative fuels is vital to the success of the program**
- **Standards development and adoption enhances market acceptability**

## Financing

- **Appropriate incentives and commercially tenable financing packages encourage alternative fuel investments**



# LESSONS LEARNED



## Manpower Capability

- Skilled manpower and continuing education are essential to sustainability

## IEC

- Involving a large cross-section of users and consumers in policy debates ensures broad-based adoption of alternative fuels
- Awareness raising campaigns contribute to mass-based adoption of alternative fuel technology



***THANK YOU***

*[www.doe.gov.ph](http://www.doe.gov.ph)*