

# 2008 PHILIPPINE ENERGY SUMMIT

\$100 Per Barrel - Crisis or Opportunity

INDUSTRY EXPORT SECTOR CONCERNS

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# OUTLINE

- OIL AS HEATING ENERGY SOURCE
- OIL AS POWER ENERGY SOURCE
- OIL AS RAW MATERIAL SOURCE
- COMPETITIVE ALTERNATIVE SOURCES OF FUEL

# OIL AS HEATING ENERGY SOURCE

- Most popular sources of Heat Energy are:
  - Diesel Oil for small capacity burners is increasingly expensive
    - Due to limited refinery capacities & higher taxes
    - *Should shift to cheaper heavy fuel oil*
  - Heavy Fuel Oil for large capacity burners marketed at 3% max S
    - *DENR should permit continued use of this S level*
    - *Large heat energy users should shift to gas, coal & geothermal heat sources for economy and provided capital investment incentives*
      - ◆ *Bulk Natural Gas is cheaper & cleaner than petroleum sources*
      - ◆ *Private Bulk LNG terminals and pipelines should be supported*
      - ◆ *Domestic gas should be priced competitively vs imported gas by adjusting royalty take*

# OIL AS POWER ENERGY SOURCE

- Power from fuel oil costs much higher than gas, coal, geothermal energy
  - *WESM pricing therefore very sensitive to dispatch of fuel oil based power*
  - *Negotiate Open Access ASAP for industry to source from lowest cost power suppliers and avoid fuel-oil based power*
  - *Consider retrofitting of thermal plants to coal*
- Power generation <10% based on fuel oil, mainly in Visayas & Mindanao
  - *Island grids and eco-zones served by fuel oil driven power plants can be cost competitive by avoiding/minimizing transmission and distribution costs which reach 20% of power bill.*

# OIL AS RAW MATERIAL SOURCE

- Petrochemical prices have escalated rapidly in line with crude oil
  - Shift of petrochemical capacities to energy-rich countries while traditional capacities remain or have shut down
  - *Conduct studies to restore natural sources of products formerly displaced by petrochemicals.*
    - *Bio-diesel co-product glycerine is becoming major source again*
    - *Cellulose-to-ethanol will be major source of future ethanol which R&D should be supported*
  - Return to Old Processes to produce fuels and chemicals from coal & electricity
    - *Coal supplies more extensive & prices are more stable*
  - *Environmental considerations favor the shift from plastics to paper, i.e. towards biodegradability of consumer products that go to waste.*

# COMPETITIVE ALTERNATIVE SOURCES OF FUEL

- Competitive Alternatives require **thorough cost analysis** of every alternative considering viability of technology, financial, land resources, etc.
  - Biodiesel from Natural oils from coconut, jatropha, malunggay, etc.
  - Ethanol from fermentation of sugars, biomass, etc.
  - Gasification of charcoal and coal
  - Hydro, geothermal, wind, nuclear and hybrid combinations for electricity
    - *Consider wind-hydro storage combinations for isolated users*

# COMPETITIVE ALTERNATIVE SOURCES OF FUEL

- Further Issues to Consider
  - Food to Fuel
    - Food Security
    - Allocation of land resources
  - Environmental Issues
    - Destruction of forests for palm oil crops
    - *Consider extensive reforestation and commercial tree plantations*
- Reminder to be Competitive
  - *Benchmark All Our Costs vs Our Competitors in the Region*
  - *Be transparent and act.*

**Thank You.**