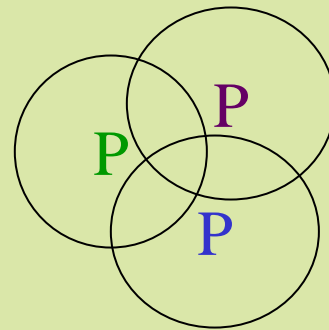


PGC “A” Study Group A.2



Natural Gas: The Clean Option



Natural Gas: The Clean Option



CURRENT SITUATION: Low consumption of NG

- Global Warming: GHG <<high energy demand
- Non renewable resources: Not efficiently used
- Harmful effects: << **Pollution** >> **PM** severely affect **P & P**
- Biodiversity loss: Ecosystems << Global Warming & Pollutants
- Industrial Sectors:
Energy System>> not Sustainable or Climate Friendly
- Energy access & availability: Critical
- Fuel and energy costs: Increasing



Natural Gas: The Clean Option



THE TOOL TO IMPROVE The CURRENT CONDITIONS

- Replacement of other fossil fuels
for different and enormous numbers of applications:
 - **NGV – Transportation:** For replacing liquid fuels
 - **Domestic:** More efficient cooking – heating – cooling appliances
 - **Industrial:**
An input for a high number of productive processes and industries
 - **Commercial:** More efficient utilization
in shopping malls, restaurants and other premises
 - **LNG:** From regional to global fuel for convenient transportation
 - **Central Power Stations:** To generate electricity



Natural Gas: The Clean Option



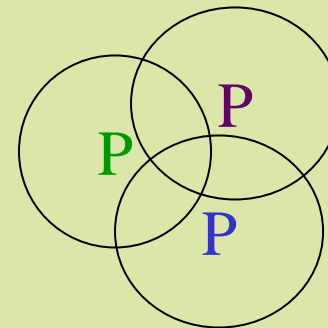
- **FUTURE SITUATION**

Sustainability Aspects: Our Three Pillars

1. Environment - Planet

2. Social - People

3. Economic - Profit



Natural Gas: The Clean Option



1. Environment

NG: The fossil fuel with the lowest level of emissions

- ❖ CO₂ Reduction
 - ❖ Urban Pollutants Reduction
 - ❖ Efficient
- Use of Non-Renewable Resources
- higher proven reserves than oil



Natural Gas: The Clean Option



2. Social Aspect

- ❖ NG contributes to
Clean air & human well-being
- ❖ NG decreases illness incidence
- ❖ NG can be used in
Social Responsibility Programs for its contribution
to Sustainability



Natural Gas: The Clean Option



3. Economic Aspect

- ❖ **Lower Energy cost:** Price & competitiveness situation
- ❖ Strong economic **integration:** Transfer of technology
- ❖ **Global economic sustainability**
- ❖ **Carbon credits:**
Promotes a sustainable emission reduction
- ❖ **Cost associated to illnesses**



NGV - Natural Gas Vehicle



- **Uses**

- Automobiles; Trucks; Buses; Boats

- **Technological Options**

- Dual System: by adding devices
- Conversion: by modifying parts
- Re-powering: by full replacement of the engine
- Single fuelled or dedicated units:
by original manufacture



NGV - Natural Gas Vehicle



Benefits & Advantages

- For the **People**
 - Most economic of all traditional fuels
 - Performance and efficiency are optimal
 - NGV reduces cars maintenance cost
- For the **Governments**
 - A strategic fuel due to higher reserves than oil
 - Benefits from the development of another industry
 - Improves transport, capacity & distribution



NGV - Natural Gas Vehicle



Reduction of combustion emissions

- GHG: reduce CO₂ E-relative emissions
- Particulate Material: serious health damage

Environmental, Social and Economic Benefits

- Planet: better use of non-renew. Preservation of biodiversity
- People: a lower number of pollution related illness cases
- Profit: less spending on respiratory cases



Natural Gas – The Clean Option



Thank you!

