

## Natural Gas as Fuel Replacement Therapy for Petrol/Diesel Addiction

**Malaysia**

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### Background Information

Malaysia has developed an addiction to fossil fuel consumption in relation to the transportation sector. This habit, as a result of 30 years of national fuel subsidies, needs to be significantly decreased. In order for this to happen, there needs to be political perseverance and cooperation between policy makers and people who use public transportation.

In order to discontinue extreme fossil fuel consumption, policy makers must develop an adequate fuel substitute. Since the immediate eradication of fossil fuel consumption can be harmful to both politicians and consumers, policy makers in Malaysia have developed a replacement therapy through Natural Gas for Vehicle (NGV) in their public transportation. NGV provides the Malaysian public transportation systems with a less disruptive and less environmentally destructive substitute to fossil fuels.

### Policy Details

The Natural Gas for Vehicle (NGV) initiative started in the 1980's with the NGV conversion in taxi-cabs. The initial NGV initiative was a sim-

#### Quick facts

Zone	Putrajaya
Topic	Transport, Natural Gas for Vehicle
Implementing Agency	Malaysian government

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ple concept of providing a cheaper fuel source in natural gas for mass transportation since natural gas is abundant in Malaysia. Today, 95% of operating taxi-cabs in Malaysia run on natural gas. It has been proven to be a long term and successful petrol replacement therapy in a public transportation system.

Since the oil crisis in 2008, the Malaysian government has been attempting to initiate an all-new diesel replacement therapy initiative. Putrajaya, the government capital of Malaysia, operates 129 buses under the 'Park N Ride' programme. This programme, which provides low carbon transportation for commuters within the city, has been a successful replacement therapy. Private bus companies are already beginning to purchase NGV buses for intercity and campus travel in universities. Within the next 4 years, there will be around 536 NGV buses and around 174 NGV stations by the national oil company, Petronas Berhad. The number of NGV motor cars has increased to 53,000 vehicles today due to the availability of NGV stations nationwide.

The benefit of fuel replacement therapy programmes is that they do not require much political willpower. Since NGV's can be introduced alongside existing petrol and diesel vehicles, projects can be categorized as a "pilot" or "complementary. Currently, Putrajaya provides many dedicated natural gas buses as a means of public transportation.

### Policy Challenges

Public awareness of NGV initiatives is relatively low amongst the Malaysian public. Since fuel replacement therapy is an easy approach towards a greener mass transportation form, with midrange capital expenditures and little need for political will power, awareness in this alternative can complement existing transportation needs.

Another policy barrier that exists for NGV is the availability of NGV refilling stations. The cost of building NGV stations requires twice the capital expenditure compared to building petrol and diesel stations. The payback period is fairly long and it has been reported that NGV station operators lose money due to inconsistent demands from taxi cabs. However, viewing NGV's in the long run reveals that NGV's can be very beneficial. For example, NGV buses are more efficient since they refill with large amounts of gas which decreases the time needed for constant refueling. A single NGV bus approximately represents the capacity of 12 taxi cabs per refill and will be better for customers who have fixed routes.

### References

**The following documents informed the development of this paper.**

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