

# **Ground-Level Ozone**

A Negotiated Rule-Making Process on Varara's Air Pollution Crisis

## **Instructions for the MOF Negotiator**

From the MOF Planning and Budget Office

Camitia's economy, like those of many other countries right now, is very weak. A historic opportunity for financial reform has recently been lost because of a lack of consensus. You must try to improve the government's financial situation and the national economy by any means possible.

Environmental issues have not been seen as important until now. The ground-level ozone crisis affects all sectors, including health, security, and tourism. If we do not improve the Varara's environmental and fiscal health, firms will continue to leave the city, and tourism will decline precipitously.

### **Background on the MOF**

As you know, the Ministry of Finance (MOF) is a federal agency charged with managing the nation's finances. We also manage the Environmental Trust Fund created to support the operation of the Metropolitan Environmental Commission (MEC). Because of our budgetary control, we are a very powerful entity. However, this power is threatened by the current crisis and the push for decentralization under regional trade agreements. We recognize that many of the measures proposed in this meeting will be costly, and it is our job to balance Camitia's economic competitiveness and environmental concerns.

Oil is one of Camitia's main sources of our national income. The MOF must tread a fine line with the national oil company (the Camitia Petroleum Company, or CPC), and manage a relationship that has already been damaged by mistrust. The oil industry feels that we do not leave them enough money for investment, and we should seek to remedy that concern.

### **Position on the Reduction of Ground-Level Ozone**

Funding is tight during this time of economic recession. It is important to keep in mind that resources used to address ground-level ozone are resources that will be unavailable to address other, more pressing, local priorities, such as security, education, and other environmental issues.

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Thus, our actions should be limited to relatively easy, cost-efficient activities. The MOF has begun seeking ways to use economic instruments, such as taxes and congestion pricing, to effect environmental improvements.

## **Position on Investments for Environmental Protection**

As the representative of the MOF, you can acknowledge that the environment has not been at the top of our agenda. Issues such as decentralization are more important to us. We feel that one of the biggest barriers to any change, environmental or fiscal, is the problem of managing and coordinating existing funds. For this reason, we feel that direct federal subsidies are an inefficient way to accomplish environmental goals.

We know you personally hold pro-environment ideas and are part of a growing movement of like-minded individuals within the Ministry. Nevertheless, you represent the MOF, not yourself, and the Secretary has said that this meeting is very important for the Ministry.

## **Primary Concerns**

We have four major concerns in this negotiation. First, our primary national revenue source derives from the CPC's production and sale of oil. The phase-in of low-sulfur fuel will require the CPC to make a huge investment in refinery facilities, which will decrease their contribution to the national treasury. We particularly don't understand why a standard of 15 ppm is necessary, given that MES 2 vehicles require only a 30 ppm level. Option 3 (fast phase-in) is thus impossible from our perspective. Second, costly policy options such as Metro extension and ring road construction are not viable given our limited finances. Furthermore, due to the new decentralization policy, we have transferred to Sandoa the financial mechanism for managing highways and to Varara the mechanism for managing the Metro infrastructure. Third, congestion pricing is more appealing than it at first appears. Even if the scientific analysis shows that it has less emission-reduction impact for the price, increased revenue can be gained from the congestion fees. Fourth, the MicroBus Transport Association (MBTA) requires subsidies for their operation. But a direct subsidy to the operators, without conditions, would not benefit passengers or the environment.

## **Negotiating Strategies**

Basically, we are the strongest national agency. You should be proud of that. National economic issues are no less important than environmental concerns. So, be confident when you argue your points. You should caucus with the CPC and the Camitia Auto Industry Association (CAIA) to coordinate your interests. You need to advocate for

congestion pricing as a tool for securing financial resources that can then be used to implement other policies. Only if the stakeholder group agrees to congestion pricing or tax mechanisms on new vehicles can we give the MEC another US\$1 billion (which we know it wants) for the Environmental Trust Fund. Try to identify the policy option package with the lowest costs and the greatest reduction in emissions.

## **Background Information on Congestion Pricing**

For some years now, and after a few very successful examples in other countries, there has been an intense push in Camitia to develop economic instruments for environmental protection. Under the congestion-pricing option, fees are levied on drivers who use certain highways and main streets, in order to reduce traffic congestion. Such taxes make drivers aware of the costs they impose on the environment and on other drivers. The taxes could be set high enough to discourage driving, thereby facilitating the attainment of air-quality standards. Congestion pricing also allows regulators to take into account peak-hour periods and seasons and the relative emission levels of various vehicle types.

In a 21-month pilot test in the mid-1980s in Hong Kong, congestion pricing demonstrated its technical feasibility. Hong Kong's system performed brilliantly. Average vehicle speed rose 10 percent, fuel savings increased 9 percent, and emissions decreased 17 percent. Ultimately, congestion pricing helped Hong Kong to solve its huge traffic problems.

Congestion pricing is an equitable option, given that low-income residents tend to use public transportation more than high-income residents. The Metropolitan Transportation Commission (MTC) could use a portion of the toll revenues to finance the expansion and improvement of public transportation. High-income individuals would benefit as well, because the value of travel time is proportional to the wage rate, and if time-savings are proportionate for everyone, the benefits rise with income.

## **Decision Options**

Guidance is provided regarding our top priorities only. Unacceptable policy options are also highlighted. You are to strive for these outcomes. If our first or second choice is impossible to achieve, we leave it to you to use your judgment as to what best meets the MOF's needs.

## **Decision 1: Sulfur Content in Regular Unleaded Gasoline**

**1<sup>st</sup> Choice: 300 ppm in 2008 and 30 ppm in 2015 (Option 1).** In order to make low-sulfur fuels available, the CPC needs to make significant investments in refining capacity, which will reduce the amount of taxes contributed to the Ministry of Finance. Thus, we favor the slow phase-in of low-sulfur fuels.

**2<sup>nd</sup> Choice: 300 ppm in 2006 and 30 ppm in 2011 (Option 2).**

**Oppose: 300 ppm in 2004, and 30 in 2008 (Option 3).**

## **Decision 2: Emission Standards for New Vehicles**

**1<sup>st</sup> Choice: MES 2 in 2016 (Option 1).** Fuel-quality improvement goes together with emission standards. If new emission standards are approved, then you will have to let the CPC keep more funds and charge them less in taxes so that they can invest. Remember that the oil company is the main source of income for the country. Thus, you want the slowest phase-in possible.

**2<sup>nd</sup> Choice: MES 2 in 2013 (Option 2).**

**Oppose: MES 2 in 2011 (Option 3).**

## **Decision 3: Enhanced Inspection and Maintenance (I&M) Program**

**1<sup>st</sup> Choice: OBD Systems and Emission Warranties (Option 5)**

**2<sup>nd</sup> Choice: Public Audits (Option 2)**

Options that include private investment are the most appealing to us. On-board diagnostics (OBD), for example, are a viable technology and require no public investment. Nevertheless, you don't oppose any of the other measures.

## **Decision 4: Public Transportation**

**1<sup>st</sup> Choice: Congestion Pricing (Option 4).** Option 4 is very appealing to us. Instead of having to pay for the improvement of air quality, this mechanism will reduce ground-level ozone while generating revenue for the government. Advocate strongly for this option. The money from congestion pricing could go to the Environmental Trust Fund. According to our analysis, this option can generate US\$2 billion by 2018.

**2<sup>nd</sup> Choice: Regulated Competition for Microbuses (Option 5).** We also favor Option 5. It makes sense to regulate the microbuses. Microbus operators are not currently taxed, and under a regulatory scheme they undoubtedly would be.

Metro extension (Option 1) and ring road construction (Option 2) are issues for local governments to decide based on their local budgets. We don't really oppose these projects, but you shouldn't make an effort to push them. Personally, we think that expanding the Metro is a much better idea than building ring roads.

**Oppose: Subsidy to Microbuses (Option 7).** Many subsidies are not cost-effective as an environmental policy. Up to half of any subsidy benefits the employees in the industry rather than the public. Also, subsidies are not particularly effective in shifting travelers from private to public transport. Subsidizing cleaner vehicles and/or fuels is a more direct approach. Only if the group agrees to regulate the microbuses (above) should you consider providing the microbuses with a direct subsidy.

## **Decision 5: Assigning Enforcement Responsibility and Financing**

Varara and Sandoa must find their own additional resources. The stakeholder group ought to be able to come to a reasonable agreement that is relatively low cost. At maximum, the MOF can contribute US\$6 billion to the implementation of any agreement that is reached. We can only increase our contributions to the Environmental Trust Fund if we secure the congestion-pricing option or some other kind of tax on vehicles.

## Summary of the MOF's Positions

**Priorities** (1) The fewer resources spent from federal sources, the better  
(2) The use of creative economic instruments

**Constraints** (1) Everybody thinks that our resources are the key to solving this crisis, but our funds are in fact limited, and the environment is not first on our priority list.  
(2) In the past we gave Varara funds for infrastructure improvements, but we cannot do that anymore.

### **Decision 1: Sulfur Content in Regular Unleaded Gasoline**

1<sup>st</sup> Choice: 300 ppm in 2008 and 30 ppm in 2015 (Option 1)  
2<sup>nd</sup> Choice: 300 ppm in 2006 and 30 in 2011 (Option 2)

### **Decision 2: Emission Standards for New Vehicles**

1<sup>st</sup> Choice: MES 2 in 2016 (Option 1)  
2<sup>nd</sup> Choice: MES 2 in 2013 (Option 2)  
Oppose: MES 2 in 2011 (Option 3)

### **Decision 3: Enhanced Inspection and Maintenance Program**

1<sup>st</sup> Choice: OBD Systems and Emission Warranties (Option 5)  
2<sup>nd</sup> Choice: Public Audits (Option 2)

### **Decision 4: Public Transportation**

1<sup>st</sup> Choice: Congestion Pricing (Option 4)  
2<sup>nd</sup> Choice: Regulated Competition for Microbuses (Option 5)  
Oppose: Subsidy to Microbuses (Option 7)

### **Decision 5: Assigning Enforcement Responsibility and Financing**

The maximum we can contribute is US\$6 billion. Varara and Sandoa must find their own resources for their environmental protection programs. The MOF encourages local authorities to look for new revenue sources.