Ground-Level Ozone

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

Instructions for the CPC Negotiator

From the Executive Board of the CPC

As you know, the Camitia Petroleum Company (CPC) is a nationalized oil company and the single most important entity in the Camitian economy. We have exclusive rights to oil exploration and production in Camitia. The government relies heavily on the CPC for its income; we provide almost 30% of its revenue. With the fourth-largest crude oil reserves on the continent, our company is a symbol of Camitia's sovereignty and independence. We have recently enjoyed enthusiastic public support, in large part due to our elimination of leaded gasoline. Although Camitia is one of the world's largest oil producers, about a quarter of the country's gasoline is currently imported due to insufficient refinery capacity. Any CPC investment proposals require the approval of the Ministry of Finance, which needs to protect the CPC's contribution to the national fiscal revenue.

Position on the Reduction of Ground-Level Ozone

The current ozone crisis is caused mainly by emissions from old vehicles, which cause about 70% of total vehicle emissions. The sulfur content in gasoline is not directly related to NO_x and hydrocarbon (HC) emissions. It can merely enable more sophisticated emission control equipment in vehicles. Given the weak economy, the significant cost of investing in refining capacity, and the high number of old vehicles on the road, we believe that reductions in emissions should be obtained by increasing fleet turnover and implementing a better vehicle maintenance program, rather than implementing an expensive and aggressive low-sulfur phase-in policy.

Primary Concerns

We have two concerns in this negotiation. First and foremost, we do not want an aggressive phase-in of low-sulfur gasoline (Option 3), because it is not cost effective in reducing emissions. The provision of low-sulfur gasoline poses two interlinked challenges to the CPC: addressing refining and distribution costs, and providing enough volume to meet the demand.

Second, we strongly favor cost-effective policy options such as the harmonization of inspection and maintenance (I&M) programs, which has almost same benefit as the aggressive sulfur phase-in option but would cost only US $0.2 billion. We must remind the others that we all face an economic crisis as well as an environmental one.

Background on Camitia's Oil Industry

Because Camitia's heavy crude oil averages 900 ppm of sulfur, achieving lower sulfur levels will be costly. Our costs would include a significant capital investment in refining processes (US$4-9 billion dollars, depending on the phase-in scenario) and additional production costs of US$300-350 million per year. These costs would require us to raise gasoline prices by six cents per gallon. Depending on the final fuel standards and given the current world downturn in the refining industry, one or more refineries may need to be closed. Clearly, it is very costly for us to take action to help the environment. The CPC is now faced with the challenge of providing a more expensive new product at a time when overall gasoline demand is increasing yet refining capacity is decreasing. The cost of sulfur reduction follows a nonlinear relationship with costs; costs increase significantly if sulfur is to be reduced to 50 or even 150 ppm. As a consequence, a fast phase-in of low-sulfur gasoline may force the CPC to *import* the low-sulfur gasoline, which is more expensive.

Negotiating Strategies

Pass the ball to the MOF. We are trying to do what is best for our country. The problem is money. Without the approval of the MOF, we cannot do anything. Currently, 70% of gasoline price is due to tax by MOF and only 30% of the price goes to CPC. So, if you feel too much pressure, pass the ball to the MOF.

Appeal to the automakers' interests. It seems to us that the CAIA does not want a fast phase-in of emission standards. So, you can argue that costs could be reduced significantly if the timetables for the phase-in of low-sulfur gasoline are linked to the sales of new vehicles (since low-sulfur gasoline is useless for old vehicles anyway).

Use the current status of fleet composition. Existing car fleet in Metropolitan area is very heterogeneous. 50% of the vehicle fleet in Metropolitan area was made before 1990. So, not all the cars will benefit in terms of emissions reductions from the low sulfur gasoline. It will be a waste of resources to make all of Camitia's fuel low sulfur in the near term. That's why we propose having long transition period during which new vehicles and older vehicles can use appropriate fuels.

Highlight the national economy. The national economic situation is everybody's concern. Because the CPC is a national company, investment in refining capability directly affects the government's income. These financial responsibilities to the national economy have left the company with little ability to invest in oil exploration and development.

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 CPC's needs.

Decision 1: Sulfur Content in Regular Unleaded Gasoline

1st Choice: 300 ppm in 2008 and 30 ppm in 2015 (Option 1). The Varara Environmental Department's prediction that achieving low-sulfur standards such as 30 ppm will be technologically feasible and cost-effective by 2008 depends heavily on a few new desulfurization technologies that have not been commercially tested. During the comment period on this rulemaking, an additional potential technology may emerge. Extending the deadline would allow other innovative solutions to develop and offer a much more efficient transition to lower-sulfur fuel.

2nd Choice: 300 ppm in 2006 and 30 ppm in 2011 (Option 2).

Oppose: 300 ppm in 2004 and 30 ppm in 2008 (Option 3). This option has an almost same phase-in schedule with neighboring developed countries'. There is only two year gap in schedule between those countries and Camitia. It is inappropriate approach considering our economic situation.

The lead-time needed to modernize manufacturing plants in order to reduce the sulfur content in gasoline from 700 ppm to 300 ppm can be three years or more. That's why we cannot agree with this irresponsible option. Furthermore, according to data from the U.S. Environmental Protection Agency, the desulfurization process used to produce 30 ppm sulfur gasoline itself will actually increase refinery emissions of NO_x by 4,500 tons per year, HC by 7,840 tons per year, SO_x by 410 tons per year, particulate matter by 96 tons per year, and CO by 1,130 tons per year. People should be concerned about these byproduct emissions.

Decision 2: Emission Standards for New Vehicles

1st Choice: MES 2 in 2013 (Option 2). As you want a slow phase-in of low-sulfur gasoline, you cannot ask for a fast adoption of emission standards. However, you cannot say that we want a slow adoption of emission standards.

2nd Choice: MES 2 in 2016 (Option 1).

Oppose: MES 2 in 2011 (Option 3). You should avoid a situation in which the auto industry presses the CPC into quickly adopting lower-sulfur gasoline.

Decision 3: Enhanced Inspection and Maintenance Program

1st Choice: Harmonization of the I&M Programs (Option 1).
2nd Choice: OBD Systems and Emission Warranties (Option 5). A teeth of the cars produce over half of all the vehicle emissions. This is very valuable information. It tells us where to focus a large part of our effort. With improved inspection and maintenance programs, we have a great deal to gain in avoiding costs for other, more costly treatments for ground-level ozone. And it targets the small percentage of drivers who set up the rest of us to spend more on air pollution programs. So, we support the harmonization option and the on-board diagnostic (OBD) option. Our research says that fleet turnover (which is facilitated by the I&M programs) has more impact in improving air quality than investments made to make transportation fuel cleaner.

Decision 4: Public Transportation

We have little interest in what is agreed upon regarding public transportation. You can give other another group member (or members) what they want in this category in trade for agreement on other issues that are more important to us.

Decision 5: Assigning Enforcement Responsibility and Financing

We need the MOF's approval to invest on in a desulfurization process. To adopt the moderate phase-in option for low-sulfur gasoline (Option 2), we need US$6-8 billion, depending on which alternative future is deemed most likely. For Option 3 (fast phase-in), we need US $8-10 billion. But, our estimates say we can only afford a maximum of US $5 billion. Thus, without a grant from the MOF, we cannot produce lower-sulfur fuel.

Summary of the CPC's Positions

Priorities

(1) Slow phase-in of low-sulfur gasoline (Option 1)
(2) Moderate phase-in of emission standards (Option 2)
(3) Harmonization of the I&M Programs (Option 1)

Constraints

(1) No fast phase-in of low-sulfur gasoline (Option 3)

Decision 1: Sulfur Content in Regular Unleaded Gasoline

1st Choice: 300 ppm in 2008 and 30 ppm in 2015 (Option 1)
2nd Choice: 300 ppm in 2006 and 30 ppm in 2011 (Option 2)
Oppose: 300 ppm in 2004 and 30 ppm in 2008 (Option 3)

Decision 2: Emission Standards for New Vehicles

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

Decision 3: Enhanced Inspection and Maintenance Program

1st Choice: Harmonization of the I&M Programs (Option 1)
2nd Choice: OBD Systems and Emission Warranties (Option 5)

Decision 4: Public Transportation

Of little interest. You can utilize this decision item as a linkage to other issues important to us.

Decision 5: Assigning Enforcement Responsibility and Financing

With the MOF's approval to invest in a desulfurization process, we need US $6-8 billion for low-sulfur Option 2 and US $8-10 billion for low-sulfur Option 3. In either case, we can only provide US$5 billion.