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CPPI Response to the Discussion Questions Raised in the Companion Document to the Notice of Intent on Clean Air and Climate Change

December 18, 2006

General

CPPI supports the government's call to action on clean air and climate change. We can offer constructive input that will result in tangible improvements that will benefit all Canadians. Our advice on both clean air and climate change identifies effective actions, preserves industry competitiveness, respects all jurisdictional authorities and promotes cooperation between Canada and the United States.

CPPI intends to respond separately to the *“Notice of Intent to Develop and Implement Regulations and Other Measures to Reduce Air Emissions”*. Our focus here is to respond specifically to the questions raised by the government in the Companion Document to the NOI. These questions deal with the design of the short term targets and associated regulatory elements. The government has set an ambitious deadline of spring 2007 to finalize the overall regulatory framework including the establishment of facility specific targets for air pollutants and greenhouse gas emissions. This is a huge undertaking and can only succeed in our view, if maximum use is made of previous work and analyses, simplicity prevails and the emission targets are realistic and achievable.

With respect to air pollution, CPPI collaborated with provincial and federal governments to develop a regulatory framework and an effective companion stakeholder process for setting emission targets for refineries. This National Framework for Petroleum Refinery Emission Reductions (NFPRER) was fully endorsed by the CCME in 2004 and has already been used to set and implement NO_x and SO_x reductions using sector –specified caps in several provinces (e.g. Ontario). It has been recognized by Environment Canada as an example of “smart regulations”. We shall be promoting the continued use of the NFPRER as an effective approach for setting air pollution emission targets for petroleum refineries consistent with the principles articulated in the government's NOI.

In responding the specific questions in the Discussion paper, CPPI will address air pollutants and GHG emissions separately. This is because different approaches will be required if meaningful progress is to be made on both fronts. At the same time it is important to point out that air pollutants and GHGs are not independent because reducing air pollutant often leads to an increase in GHG emissions. A clear example of this is the desulphurization of our fuels which requires increased refining intensity. This is

producing significant air pollutant reductions in the transportation sector but has resulted in a 20% increase^{*} in refinery GHG emissions.

As a result, the target setting process for GHGs must include an adjustment for GHG emission increases that result from implementing other environmental regulations. In the case of refining, this means increasing our GHG emission targets because of fuel desulphurization regulations.

Response to Discussion Questions (1 - 12)

1. How should emission targets be determined? What roles should benchmarking and technology assessment play in a target setting approach? What are the key socio-economic considerations that should be taken into account?

Air Pollutants:

Canada Wide Standards (CWS) exist for ambient air quality objectives of key parameters (e.g. ground level ozone, PM,) to protect the environment and human health. CWS should be used to prioritize emission targets within regional air sheds to ensure that actions maximize health benefits. The CWS were developed in a collaborative fashion with governments, health and environment NGOs and a cross section of industry. These ambient air targets are science based and take into account a broad spectrum of factors including: seeking improvements in areas of air quality concern and providing a framework for maintaining good air quality in areas where it exists (Keeping Clean Areas Clean). The CWS have a built in mechanism for updating the targets at a set interval, the next one being 2008. The CWS addresses the most pressing air quality issues and sets stretch targets which are more stringent than the U.S.A. and many other jurisdictions. The NFPRER should then continue to be used where required to set refinery specific performance based targets within air sheds. Implementation by the local authority solves jurisdictional concerns. Federal regulations should serve as a backdrop if local efforts fall short of federal requirements.

CPPI therefore strongly recommends that government set refinery emission targets using the CWS and the NFPRER as described above. The NFPRER is a 10 year plan aimed at capping emissions at levels that will achieve convergence of the environmental performance of Canadian refineries with the current and future performance of comparable U.S. refineries (U.S. emission requirements are amongst the most stringent in the world). A cornerstone requirement for the

* 2004, Purvin & Gertz/ Levelton Report, "Economic and Environmental Impacts of Removing Sulphur from Canadian Gasoline and Distillate Production"

framework to succeed is benchmarking Canadian refinery emissions against those in U.S. refineries.

This requirement has been met and benchmarking is done regularly (currently triennially). The combination of performance based regulations and convergence with the U.S. help maintain our sector competitiveness. The NFPREER enables near term progress in emission reductions while keeping options open for more significant reductions that can be achieved more cost effectively through capital stock turnover. Preserving and where possible improving our competitiveness through “smarter” regulation than the U.S. is a critical socio-economic consideration for our sector. We believe the NFPREER is a winner for the environment, government and industry both in the near term with convergence in 2015 and beyond.

GHGs

For setting short term GHG emission targets, we stress the need to temper expectations. GHG emissions (CO₂ in particular) are directly and integrally related to how energy is used and supplied in a modern industrial economy. As the economy grows, energy use, which will be dominated by hydrocarbons into the foreseeable future, will continue to grow, even though industry continues to improve its energy efficiency.

The consequence is growing CO₂ emissions. And changing this is not simple, will take time and is only possible with development and deployment of commercially viable transformative technologies.

So what then can we do? In the near term, there are no magic bullets - realistically the most important thing is to intensify efforts to improve energy efficiency, while also promoting the research and development of the transformational technologies that can make a difference.

Significant progress in GHG emission reductions will ultimately be transformative technology driven on a global level, and therefore longer term. Canada's actions need to be consistent with this reality.

It is important that action on GHG emissions not adversely impact the competitiveness of the refining sector. Our primary competition is from the U.S. refiners who will not have regulated GHG emission targets. Therefore any additional costs imposed on the Canadian industry will not be required of the U.S. refiners, thereby tilting the playing field in favour of the U.S.A. Some of these costs may be recoverable in the short term through judicious investment to improve energy efficiency, and in the longer term through successful new technology development.

The refining sector has been viewed by Environment Canada as a sub sector of Oil & Gas. We believe this is inappropriate. Refiners need to be dealt with as refiners and not just as a subset of another sector. In fact, we are a manufacturing industry and should be viewed in that way. Like other manufacturing industries, we provide goods and services directly to Canadians. We are price takers for both our feedstock and our products, as set by the international market. With respect to GHG targets, we believe that a principle of non-discriminatory treatment should be applied across all sectors, and so expected GHG targets for refining would be in line with the burden assigned other all sectors, including other manufacturing.

2. How should local or regional air quality issues be taken into account in setting targets?

Air Pollutants

Consistent with our answer to question 1, we recommend that ambient air quality standards be set nationally, and emission targets be set on the needs of regional air sheds. CPPI supports the objective expressed in the Notice of Intent of the federal government working in partnership with all levels of government to understand the priorities for action.

The impact of atmospheric chemistry on some of the pollutants can be very complex, and so robust regional modeling is required to understand and then identify the most cost-effective solutions. Robust predictions of ambient air concentrations should reflect imminent changes due to existing regulations (e.g. more stringent vehicle emissions standards) in the development of priorities. Environment Canada's data indicates that improvements in air quality are clearly evident with many pollutants and these reductions are a direct consequence of CAC emission reduction over the past two decades. Other more complex pollutants like ground level ozone are more challenging to forecast and have not responded directly in accordance with the reduction of precursor gases. One of the key considerations here is the impact of trans-boundary and background emissions. Ultimately, targets need to be in terms of desired performance level and not merely reduction targets.

GHGs

Climate change and associated reduction in GHG emissions are global concerns which cannot be addressed through local air quality targets.

3. *What are the considerations in determining whether different target-setting approaches could be utilized for new versus existing sources?*

Air Pollutants

The NFPREER was designed and is intended to be used for existing facilities. Important considerations in setting targets for existing sources would include local air shed considerations, capital stock turnover and benchmarking. Approaches will likely need to be different for new sources. It may be possible to use the framework to establish an entry point for new facilities. Existing processes for securing an operating license for new facilities involve rigorous scrutiny by regional authorities and consideration of the best available technologies economically achievable. This may be sufficient to establish the air emission requirements for new facilities.

A further consideration that jurisdictions need to acknowledge is that allowances need to be made for industrial growth as it is this development that brings value, jobs, and prosperity to the regions.

GHGs

Given the increasing cost of energy, and past experience, new sources can be expected to incorporate the most current, economic energy-efficient technologies and processes. Existing approval processes will assure that energy efficiency is incorporated in the design of new facilities.

New sources could be integrated into the approach for existing sources after allowance for start-up and break-in periods.

4. *What should be the short-term targets for air pollutants and GHGs? As targets become more stringent over time, what would be the best approach to determine those targets? How far in advance should these targets be determined? Should such future targets be included in regulations?*

Air Pollutants

See CPPI answer to Question 1 where the use of CWS and the NFPREER is proposed for setting air pollutant emission targets. The driver for greater stringency over time becomes the standards set in the U.S. By converging to the U.S. refinery performance the Canadian refineries are able to maintain their competitiveness position relative to the U.S. refiners, our major competitors. Refinery specific targets can be included in regulations or operating permits.

GHGs

Regarding the short term GHG intensity targets, our understanding of the government position is that targets must be set to align with the timing for the market readiness of new technologies and capital stock turnover considerations. It is clear that new commercially viable breakthrough technologies will need to be developed if a material reduction in GHG emissions is to be achieved. What this translates to is short term targets need to be based on what is reasonably possible to achieve through improved energy efficiency initiatives for existing facilities, and possibly via BATEA for new facilities.

The methodology for setting targets for our sector and our refineries should respect the following considerations:

- Taking into account the competitiveness impacts of meeting regulatory targets
- Ensuring that the refining sector is treated equitably with other manufacturing sectors
- Developing a GHG intensity based target setting regulatory approach based on continuous improvement in GHG emissions intensity and investment in transformative new technology
- Basing short term reduction targets on GHG emissions that come from fuel combustion sources only. Process emissions (e.g. those associated with H₂ plants, Catalytic cracking units, cokers, reformers, etc.) would not be included. Process emissions do not change with energy efficiency improvements because they are generated by chemical reaction within the processes themselves. However, if a refiner is able to implement emerging transformational technology then that refiner should be able to apply, through a program similar to an “Offsets Program” to obtain credit for implementing this transformational technology.
- Allowing for adjustment of targets when other environmental regulations that increase GHG emissions are implemented. More specifically the refining sector targets must be adjusted for the GHG impacts of fuel desulphurization regulations.
- Ensuring that no refinery is penalized for early action on GHG emission reduction.
- Incorporating as a primary compliance option (for when actual emissions exceed target) contribution to technology development via payment to a technology fund. This is preferred over emissions trading as it invests in new technology here in Canada that will lead to greater emission reductions over the medium and long term.

5,6,7,8 *What elements are needed to ensure that an emissions trading mechanism functions effectively? Should an emissions trading system be limited to domestic trading? What would be the advantages and disadvantages of enabling cross-border trading with the U.S.A.? Should a domestic offset system be developed as a compliance option? Should a system of “opt-ins” be implemented to facilitate the voluntary participation of non-regulated entities?*

Air Pollutants

Emissions trading (ET) is an important compliance mechanism for clean air. ET can provide an efficient mechanism for the market to help meet the environmental/health objective by focusing investing in pollutant reductions in sites where the most cost effective reductions can be made. Other plants within the same air shed can basically contribute towards the reduction through buying ET credits. The air shed could of course encompass impinging Canadian and U.S. regions. ET with U.S. regions creates a larger market place and could lead to lower compliance costs while reducing environmental emissions in an air shed. An international approach to the common air shed would require harmonized rules and processes. The use of offsets and 'opt-ins' should be carefully considered. If these options eliminate the possibility of trading with the larger U.S. market, they may not be affordable.

GHGs

On the GHG side, where commercially viable transformative technology needs to be developed and implemented, it is not clear that a compliance option such as emissions trading (ET) will result in any actual reduction in GHGs. Certainly when it comes to IET, this is often advocated by foreign entities with credits to sell. This represents wealth transfer out of Canada with again no guarantee that GHG emissions will be reduced.

It is important however to have access to a suite of cost competitive compliance alternatives for maximum flexibility in compliance. These mechanisms, however, must be workable. The mistake of sacrificing simplicity and workability for layers of bureaucratic red tape all in the need to account for every gram of CO₂ emitted must be avoided. The recent “Offsets Paper” is an example of a well intended but unworkable scheme.

The notion of using offsets to help meet refinery emission targets remains important, even though the first attempt proved unwieldy. In the refining sector the use of offsets can allow the emission benefits of renewable fuels, investment in co-generation and other indirect emission schemes (e.g. converting from oil to electricity) to be counted in meeting targets.

Of all the compliance options tabled, and as mentioned in Question 4, we believe a Technology Fund as a legitimate means of compliance offers the greatest benefit to Canada and Canadian industry. Combined with the continuous improvement approach to setting targets, it demands some improvement by all and funds the development of needed transformational technology. It is also consistent with the higher level strategy supporting the overall climate change policy discussed in Question 1. This is further discussed in Question 10 below.

9. *Should a mechanism be established to encourage early action by industry before targets take effect?*

Previous attempts to encourage early action have failed. Any action after the base year would contribute towards meeting the short term GHG reduction targets. Beyond this, CPPI suggests that given the time window is tight for establishing the short term targets, and in the interest of much needed simplicity, that additional work on encouraging early action be dropped, and effort be spent on establishing the appropriate base year from which reduction targets are derived.

10. *What mechanisms could be used to stimulate technology development and deployment? How could a technology investment fund be structured?*

Air Pollutants

Technology for reducing air pollutants is largely known. The building of a robust ET system with the U.S. makes sense as a means of capturing and focusing on the most cost effective applications of technology. As such, a technology fund may not be needed.

GHGs

We believe that the technology investment fund is a vital element for enabling compliance. It represents a viable compliance mechanism – not a penalty or fine. Payment into such a fund could well be the most beneficial and cost effective tool for compliance. For example, it is preferred to ET and in particular IET (International ET) largely because it:

1. Assists in the development of transformative technologies that realistically are the only means of achieving material long term GHG reductions.
2. Invests money in Canada
3. Has the potential to fix the cost exposure of industry for compliance

In terms of structuring such a fund we offer the following ideas:

- i. Payments are there to support technology development and deployment when deployment serves a common good

- ii. Price cap on fund units is a core element for compliance. This cap needs to be reasonable, and more cost effective than the purchase of credits via ET or IET
- iii. Focus is on commercially viable transformative technology
- iv. Federal/provincial/industry governance
- v. Fund could be structured with sector specific project proposal/selection teams, each made up of government and industry sector representatives. Overall stewardship would be provided by senior government/industry representatives.

11. *Other Compliance options?*

In addition to the ideas identified in questions 5 to 10, government policy should permit companies to bank emission credits and debits starting from the base year.

12. *How should a one-window air emissions reporting system be established? Could an existing mechanism be used to guide its development?*

There are two reasons to report emissions of GHGs and air pollutants; to inform the public and to report compliance against targets. These are two separate activities. Compliance reports may contain confidential information. In fact, CPPI greenhouse gas emissions when reported by source, for example by combustion or from processes, are in themselves confidential. Compliance reporting must reflect this in order to protect the competitiveness of Canadian refiners and the Canadian refining industry. Thus compliance reports must be confidential reports between the facility and the regulator, analogous to reporting tax information to the Canada Revenue Agency.

For the purposes of reporting non-confidential information to the public either a separate system collecting non-confidential information needs to be established, or non-confidential information can be extracted from the confidential compliance report to ensure consistency while minimizing reporting burden on industry and government.

With respect to greenhouse gas reporting, industry and governments have worked collaboratively through the existing Stakeholder Advisory Committee on Reporting ("SACR") and federal/provincial National Steering Committee on Reporting ("NSCR"). We would support continuation of this SACR/NSCR process although with an expanded mandate that includes air pollutants in addition to greenhouse gases.

Finally, we stress that the emphasis must be on reducing emissions and not on reporting. Thus while reporting has an important role with respect to assuring compliance with regulations, government and industry should focus on implementing a low cost, efficient and streamlined reporting system which only collects data needed by government. To collect more than that required to access compliance and if needed identify compliance reports potentially requiring further audit by a qualified auditor only diverts capital and resources away from initiatives which would have resulted in real reductions.