

Pembina Institute input into Environment Canada's Offsets Consultations

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Ensuring environmental effectiveness

A greenhouse gas (GHG) offset system, as usually conceived, does not create net reductions in GHG emissions. The federal government's proposed offset system would, rather provide an element of flexibility in how large industrial emitters (LIEs) could comply with their targets for annual emissions, as established by the proposed covenants system. According to the *Climate Change Plan for Canada*, these targets are to be set at a level at least 92 megatonnes of carbon dioxide equivalent (Mt) below the federal government's most recently projected business-as-usual level.² Any emission reductions for which offset credits were granted would become part of the 92+ Mt of reductions to be secured by LIEs, but would do nothing to bridge the large gap between those 92+ Mt and the 240 Mt of reductions that Canada must secure to comply with the Kyoto Protocol.

There are only two significant ways in which the proposed offsets system could create emission reductions beyond those to be secured by LIEs. The first is if a smaller amount of offset credits were granted than the amount of reductions actually achieved by projects. This "discount" suggestion is made by Environment Canada's *Offset System Discussion Paper* (in **paragraph 211** and elsewhere). If the discount were modest (e.g., 10-20%), it seems unlikely that the offset system would generate more than a few Mt of reductions beyond those to be secured by LIEs. If the discount were larger (e.g., 20-50%), and on the basis that the price of credits is expected to be relatively low (around \$10/tonne), the financial incentive represented by the credits seems likely to be reduced to a point where few potential projects would be economically attractive. The Pembina Institute believes that any use of this "discount" approach must therefore be complemented by aggressive pursuit of targeted measures, especially regulated standards, financial incentives and direct investments — as the federal government has committed in the *Climate Change Plan for Canada*.

The other significant way in which the proposed offsets system could create emission reductions beyond the reductions to be secured by LIEs is through purchases of offset credits by governments (as mentioned in **paragraph 12**, of Environment Canada's *Offset System Discussion Paper*). The federal government is already testing this approach through the Pilot Emission Removals, Reductions and Learnings (PERRL) Initiative. The Pembina Institute believes that such an approach, if pursued with a sufficiently large budget, could be a promising way to make a major contribution toward Canada's compliance with the Kyoto Protocol. However, aggressive pursuit of targeted measures, as mentioned above, would also remain essential: in areas like vehicles, low-impact renewable energy, buildings and energy-using equipment, PERRL-style purchases are no substitute for regulated energy efficiency or renewable portfolio standards.

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² The 92+ Mt include 55 Mt from the covenants system plus 37+ Mt from targeted measures that affect LIEs' emissions. M. Bramley (2003), *Doing Their Bit: Ensuring Large Industrial Emitters Contribute Adequately to Canada's Implementation of the Kyoto Protocol*, Climate Action Network Canada, p. 2. Available at http://www.pembina.org/publications_item.asp?id=156.

A key conclusion of the foregoing discussion is **that an offset system must uphold the highest standards of environmental effectiveness, by carefully avoiding granting credits for business-as-usual activities, by accounting as fully as possible for leakage and impermanence of biological carbon storage, by maximizing opportunities for public scrutiny, and by addressing environmental impacts unrelated to GHG emissions:**

- If governments were not major buyers of credits, then the system would, at best, do little or nothing to bridge the large gap between the reductions to be secured by LIEs and the 240 Mt of reductions needed to comply with the Kyoto Protocol. In this case, failures of environmental effectiveness could result in the offset system actually *increasing* net emissions.
- If governments *were* major buyers of credits, failures of environmental effectiveness would result in the spending of public money without the public receiving the full environmental benefits that it had paid for.

The possibility of opening up offset credit creation to a broad range of project types creates a further threat to environmental effectiveness through the double counting of the following large amounts of reductions in annual emissions, to be achieved through targeted measures, that the *Climate Change Plan for Canada* accounts for *in addition to* the reductions it allocates to LIEs through the proposed covenants system:

Agriculture (<i>Action Plan 2000</i>) ³	6 Mt
Landfills (Green Municipal Funds)	2 Mt
Transportation	21 Mt
Buildings	8 Mt
Small industrial emitters (in part <i>Action Plan 2000</i>)	3 Mt
Fugitive emissions from large industrial emitters	4 Mt
Low-impact renewable electricity (in part <i>Action Plan 2000</i> / Budget 2001)	7 Mt
Increased interprovincial electricity trade (<i>Action Plan 2000</i>)	5 Mt

Since, as mentioned above, any emission reductions for which offset credits were granted would become part of the reductions to be secured by LIEs, the granting of offset credits in any one area listed in the table above would result in double counting unless the federal government were able to achieve additional reductions in that area through extra targeted measures beyond those already needed. This would represent a major drag on the environmental effectiveness of the *Climate Change Plan for Canada* as a whole. **Hence the critical importance of upholding the “surplus” criterion** as set out in **paragraph 43** of Environment Canada’s *Offset System Discussion Paper*: “The reduction/removal, or the activity that causes it, [must] exceed the level that might reasonably be expected will be achieved due to another government climate change measure.” **We take it for granted that the federal government is already formally committed to introducing whatever targeted measures are needed to achieve the reductions listed in the table above.** Environmental NGOs and others will be holding the government to that commitment.

It is important to realize that offset credits are just one particular form of financial incentive. Governments can and must offer other forms of financial incentives in areas like low-impact renewable electricity and building retrofits. Indeed, the effectiveness of offset credits as a form of financial incentive is significantly limited by their low expected price.

³ The *Climate Change Plan for Canada* implies that these are enhancements to carbon sinks, rather than emission reductions as such.

It can be argued that rules introduced to ensure environmental effectiveness amount to burdensome restrictions on the supply of domestic offset credits that will encourage LIEs to purchase international emissions units instead. The Pembina Institute believes, on the contrary, that it is possible to design rigorous rules that ensure environmental effectiveness while remaining practical. (For example, the rules could deem certain classes of desirable activities that clearly go beyond business-as-usual and beyond what is already accounted for in the *Climate Change Plan for Canada* to be automatically eligible for offset credits.) Purchases by LIEs of international emissions units certainly raise important environmental, equity and economic concerns,⁴ but the Pembina Institute believes that they remain preferable to failures of environmental effectiveness originating in the offset system that would lead to a major transfer of liability for complying with the Kyoto Protocol from LIEs to governments and taxpayers.

Detailed comments on the Discussion Paper

The sections below follow the structure of Environment Canada's *Offset System Discussion Paper*. Numbers enclosed in square brackets refer to the corresponding paragraphs in the *Discussion Paper*.

Core design elements

- [27] The threat to the environmental effectiveness of the *Climate Change Plan for Canada* from double counting is, as outlined on p. 2 above, potentially very large. The following principle for the design of the offset system should therefore be added to list proposed in this paragraph: "The offset system will avoid any double counting of emission reductions that the *Climate Change Plan for Canada* accounts for in addition to the reductions to be secured through its proposed covenants/backstop system."
- [35–45] An additional project eligibility criterion is needed beyond the nine proposed here: "Minimize negative environmental impacts unrelated to GHG emissions." Projects to reduce GHG emissions can potentially have other, negative impacts such as emissions of toxic substances to air, water or land, as well as impacts on land use, biodiversity, etc. Such impacts must be taken into account in deciding project eligibility. This could potentially be done at the level of *classes* of projects, in order to minimize complexity. Omission of this criterion could result in the government pursuing mutually contradictory environmental objectives (reducing GHG emissions while worsening other environmental problems).
- [37] With regard to the earliest start date for projects accepted for offset credit creation, the key requirement is to ensure that projects earning credits go beyond business-as-usual practices. A project starting before the rules for offset credit creation have been publicly finalized is very likely to be a business-as-usual project that was going to occur regardless of the possibility of earning credits. The earliest start date allowed for projects accepted for offset credit creation should therefore be the date at which the federal government makes a definitive announcement of offset rules. Such an announcement should, however, be made as soon as practical so as to encourage a prompt start for desirable emission reduction activities.
- [38] This paragraph appears to assume that the covenants/backstop will set targets for LIEs not earlier than 2008. The Pembina Institute agrees that if the covenants/backstop set targets for LIEs beginning in 2008, offset credits should not be granted for reductions occurring prior to 2008, because to do so would represent a transfer of liability from LIEs to the federal government (i.e., to taxpayers), since pre-2008 units would have no value for the government in complying with

⁴ M. Bramley (2003), *op. cit.*, p. 28.

the Kyoto Protocol. As an alternative, the government could make PERRL-style purchases of emission reductions occurring prior to 2008 from projects accepted as eligible for creating offsets credits in 2008-2012 as a way to ensure that desirable emission-reducing activities begin as early as possible.

To our knowledge, the federal government has announced no decision that the targets set by the covenants/backstop will begin only in 2008. This paragraph should therefore be broadened to include the possibility that targets set by the covenants/backstop may apply to earlier years. (The Pembina Institute supports a system of targets for LIEs beginning in 2005.⁵) In this case, offset credits could be granted for reductions occurring prior to 2008, but banking of offset credits granted in respect of such reductions into the 2008–2012 period should be disallowed or at least tightly limited.

[38,90] A promise to grant offset credits for years post-2012, before Canada knows what national emissions target it will face under a second Kyoto Protocol commitment period, would represent an undesirable pre-allocation of a portion of Canada’s limited national supply of post-2012 rights to emit before we even know how large that supply will be. However, to create a sufficient incentive for desirable emission reduction projects that will operate beyond 2012, it may be appropriate for the government to make commitments to grant credits post-2012. Such commitments must be (as opposed to the “may be” in paragraph 90) conditional on a revision of project baselines at the end of 2012.

[39] In the absence of public information to the contrary, the Pembina Institute does not consider PERT to have been a rigorous or transparent process (for example, key documents were not accessible to the public, and the Pilot never published more than an early “for discussion only” version of its Rule.) It would not therefore be appropriate to grant offset credits in respect of PERT-accepted reductions. Any granting of offset credits in respect of reductions accepted by PERT, GERT or PERRL would violate paragraph 38, and so should apply, if at all, only to small volumes of reductions. There would appear to be no basis for granting offset credits in respect of reductions that have already purchased by government (i.e. have already been rendered economic) through PERRL. However, post-2007-vintage reductions from projects for which pre-2008-vintage reductions were purchased through PERRL could be eligible for offset credits if the project could be shown to be beyond business-as-usual in the sense of the *Climate Change Plan for Canada*.

[43] The “surplus” eligibility criterion is critically important to avoid any double counting of emission reductions that the *Climate Change Plan for Canada* accounts for in addition to the reductions to be secured through its proposed covenants system. However, for additional clarity, the criterion should be re-worded as follows: “The reduction/removal, or the activity that causes it, exceeds the level that might reasonably be expected due to government climate change measures needed to achieve all emission reductions quantified in the *Climate Change Plan for Canada*, including provincial/territorial government actions, except the reductions to be secured through its proposed covenants/backstop system.”

The federal government should publish a detailed list of the actions (at the technology level, not the policy level) that underlie its quantifications of Mt amounts of reductions in the *Climate Change Plan for Canada* in areas (see the table on p. 2) potentially eligible for offsets (since, we presume, the federal government based those quantifications on assumptions about technology-level actions.) This would then allow all stakeholders to see clearly how to apply the surplus

⁵ M. Bramley, op. cit., p. 29.

criterion, as re-worded above.

The surplus criterion must be further elaborated to ensure that no offset credits are granted for activities that are part of business-as-usual. The *Climate Change Plan for Canada* states (p.40) that “Offsets would have to be measurable and go beyond business-as-usual practices.” This is essential to ensure environmental effectiveness; granting offset credits for business-as-usual practices would simply be equivalent to an unwarranted cash transfer to project proponents. For example, under the current wording of the surplus criterion, credits could be granted to a project that proceeded for sound business reasons unrelated to any government actions to comply with the Kyoto Protocol and regardless of the ability to create offsets. This would not be acceptable.

Unfortunately it is difficult to know what the *Climate Change Plan for Canada* means by “business-as-usual,” as the federal government’s most recent business-as-usual emissions projection, on which the entire *Climate Change Plan for Canada* is based, has not been published, despite having been used by the federal government since early 2002. This is a break with previous government practice, and makes it impossible for stakeholders to have properly informed discussions about “surplus” or, for that matter, about the implementation of the entire *Plan*. The federal government should therefore immediately publish full details of the business-as-usual emissions projection used in the *Plan*.

Administration of the offset system

[49] There are three compelling reasons why the Program Authority should be a federal government department:

- *Accountability and transparency.* There are established mechanisms for holding governments accountable and gaining access to relevant information that do not apply to arms-length, quasi- or non-governmental bodies. The credibility, integrity and public acceptability of the offset system depends on its transparency and the accountability of the Program Authority.
- *Avoidance of conflict of interest.* As it is in the interest of LIEs to obtain offset credits in the largest possible volumes and at the lowest possible costs, there should be no industry role in the Program Authority. Specifically, the Voluntary Challenge and Registry Inc. (which currently draws two-thirds of its operating funds, and eight out of 14 board members, from the private sector) should not be the Program Authority. Industry involvement in the Program Authority would severely undermine public confidence in the offset system.
- *Provinces/territories’ lack of responsibility for Kyoto compliance.* While they must be fully consulted in the development and implementation of the offset system, provincial/territorial governments should not have ultimate authority as they will not be held responsible at the international level for Kyoto compliance and therefore lack the incentive that the federal government has to ensure the system has full integrity.

Emissions accounting for purposes of emissions trading should be at least as rigorous as financial accounting. Technical work such as verification can therefore be delegated to private sector entities but only if the rules that such entities are to apply are clear and if they subscribe to recognized and reputable professional standards.

[53,61] The credibility, integrity and public acceptability of the offset system depends, as noted above, on its transparency and accountability. There therefore need to be explicit provisions for public participation in the project review process. Specifically, there should be a public review period during the phase of review and validation of the project document. This period need not be excessively lengthy but should provide meaningful opportunities for public scrutiny.

[71,72] Domestic or international emissions permits or credits will be of varying environmental quality depending, for example, on which CDM project they originate from, or whether or not they represent Eastern European “hot air.” It is therefore essential that there be full public access to the compliance unit registry so that the public can identify and trace to specific projects the permits/credits that each LIE uses to comply with its covenant/backstop. This is a key mechanism to ensure that the environmental benefits of Canada’s implementation of the Kyoto Protocol are maximized, and replicates the traceability in National Registries of permits/credits that each country used to comply with the Protocol. The last sentence of paragraph 72, which implies there could be limits on public access to the compliance unit registry, should be amended accordingly and should state that the burden of proof must be on LIEs to justify fully any restrictions on access to information.

[74] For the reasons just stated, this paragraph, ensuring full public access to the Offset Project Registry, must be maintained. The second sentence should be amended to specify that the burden of proof must be on LIEs to justify fully any restrictions on access to information.

Design issues

[79,84] These paragraphs, as well as the glossary in Annex I, define the project baseline as what would have happened “in the absence of the project activity.” This is inadequate, since to ensure that no offset credits are granted for activities that are part of business-as-usual (see earlier comments on the “surplus” criterion), the project baseline must be defined as what would have happened under the most likely business-as-usual scenario. Fully taking into account the surplus criterion, the baseline should represent what would have happened in the absence of federal/provincial/territorial government actions related to implementation of the Kyoto Protocol. “The absence of the project” is inadequate because the project might have occurred as part of business-as-usual, e.g., for sound business reasons unrelated to any government actions to comply with the Kyoto Protocol and regardless of the ability to create offsets, or as a result of government actions to address climate change other than the offset system. We therefore propose the following baseline definition: “what would have most likely happened in the absence of the ability to create offset credits and in the absence of government climate change measures needed to achieve all emission reductions quantified in the *Climate Change Plan for Canada*, including provincial/territorial government actions.”

[88] Of the proposed baseline methods, the “historical/current situation” method should be deleted as it will generally produce a poor implementation of the baseline definition (just discussed). A flat baseline set, for example, at a historical emissions intensity level will tend to generate increasing numbers of credits for business-as-usual activities, by failing to account for “autonomous” intensity reductions and other changes in circumstances over time that would occur even in the absence of the possibility of creating credits.

[94,99,206] If the covenants/backstop for thermal electricity generation facilities set emissions intensity (as opposed to absolute emissions) targets, then emission reductions at such facilities resulting from reduced electricity purchases will not be captured by the covenants system. In this case, offset credits could be granted for activities to promote the energy efficiency of electricity consumers, without double counting. However, because it is not addressed in the *Climate Change Plan for Canada*, reduced electricity consumption in industry provides an important opportunity to achieve some of the large 60 Mt shortfall (reductions not yet allocated to government actions) in the *Climate Change Plan for Canada*. The Pembina Institute therefore believes that actions to

reduce industrial electricity purchases should not be eligible for offset credits (unless governments are the only purchasers allowed) until the federal government has worked with provinces to introduce new targeted measures to significantly reduce industrial electricity consumption, for example through a combination of demand side management programs mandated by provinces and federal financial incentives. Once such targeted measures are committed to, reductions in industrial electricity consumption could be eligible for offsets if they were surplus to the targeted measures.

[99,206] The Pembina Institute believes that a major expansion of low-impact renewable electricity is an essential component of Canada's implementation of the Kyoto Protocol. However, we recognize three potentially important drawbacks to granting offset credits for renewable electricity projects:

1. The emission reduction benefits of such projects derive from reductions in the output of thermal electricity generators, which are LIEs. If those generators have emissions targets expressed in terms of absolute emissions, then they will already receive "credit" if their output falls. Granting offset credits for such projects as well would therefore, in this case, result in double counting.
2. Granting offset credits for such projects potentially creates another form of double counting by violating the "surplus" criterion, that is, double counting of the 7 Mt of emission reductions that the *Climate Change Plan for Canada* allocates to low-impact renewable electricity *in addition to* the reductions it allocates to LIEs through the proposed covenants system (see p. 2).
3. Offset credits are unlikely to provide a strong enough incentive for low-impact renewable electricity. If credits are worth \$10 (roughly the most likely price), that translates into an incentive of only 1 cent per kWh even if it is coal-fired electricity that is being displaced.⁶ (If electricity of lower carbon intensity is displaced, the incentive would be correspondingly lower.) Such an incentive would make support for renewable electricity dependent on the fluctuating market price for GHG emissions and would not reflect the fact that its benefits go well beyond GHG emission reductions.

If thermal electricity generators have emissions targets that are expressed in terms of emissions intensity, then drawback #1 will disappear. However, the Pembina Institute prefers emissions targets expressed in terms of absolute emissions.⁷ Another way to address drawback #1 (as well as drawback #2), while retaining absolute emissions targets, would be:

- A. without changing the federal government's total budget of emission permits, to disallow low-impact renewable electricity projects from receiving offset credits but instead reserve a "set-aside" amount of permits for allocation to proponents of such projects (as is done in Ontario's emissions trading system for SO₂ and NO_x).

If option A is not pursued, drawback #2 remains formidable, especially as the allocation of only 7 Mt of reductions to low-impact renewable electricity in the *Climate Change Plan for Canada* already implies far too small a role for low-impact renewable electricity in Canada's implementation of the Kyoto Protocol; the Pembina Institute believes the 7 Mt should be significantly increased as a way to achieve some of the large 60 Mt shortfall in the *Plan*. Drawback #2 could be overcome by the following means:

- B. If the federal government published a detailed list of the technology-level actions corresponding to the 7 Mt (or the larger amount to which we believe the 7 Mt should be amended), then offset credits could be granted for projects exceeding this amount.

⁶ This assumes a typical emissions intensity for coal-fired electricity of around 1 kilogram (kg) CO₂ per kilowatt-hour. If 1 tonne CO₂ is worth \$10, 1 kg is worth 1 cent.

⁷ M. Bramley, *op. cit.*, p. 11–13.

- C. The government itself could commit to purchase a quantity of offset credits generated by low-impact renewable electricity projects, while disallowing LIEs from making such purchases. This could be characterized as a separate PERRL-style program, rather than as part of the offset system.

Drawback #3, combined with the preceding discussion, leads us to the conclusion that the best way to ensure that low-impact renewable electricity plays its appropriate role in Canada's implementation of the Kyoto Protocol would be for federal and provincial governments to provide significantly increased and expanded financial incentives, combined with low-impact renewable portfolio standards. This is the only and essential alternative to providing offset credits for low-impact renewable electricity projects. We draw attention to the example of the United Kingdom, which has both a broad GHG emissions trading system as well as an aggressive national renewable portfolio standard that provides a significantly stronger incentive for low-impact renewable electricity than would be provided by the emissions trading system.

We believe that the federal government must, as soon as possible, enter into a dialogue with the renewable electricity industry as to its role in Canada's implementation of the Kyoto Protocol. Currently, the federal government is pursuing intense discussions with the thermal electricity sector as part of its development of the covenants system for LIEs. The renewable electricity industry must be involved in these discussions to ensure that Canada's overall policy to address GHG emissions from the electricity sector is complete and coherent. Furthermore, in order to address concerns about the exclusion of renewable electricity projects from the offset system, the federal government should move, without further delay, to publicly characterize the targeted measures it intends to implement to support low-impact renewable electricity. It is very difficult to see how the right final decisions can be taken on the design of the offset system before there is more clarity both on the targets for LIEs and on targeted measures.

- [100] Proper accounting for leakage is an important element of ensuring environmental effectiveness. This paragraph must therefore be maintained.
- [101–123] The Pembina Institute believes that liability for reversals of biological carbon storage, of which the risk is great, must be borne to the fullest extent practicable by the owners of any credits granted for such storage, rather than transferred to governments and taxpayers. There must be a clear guarantee that such reversals are accounted for, and given the long atmospheric lifetime of CO₂, the minimum time period after which biological carbon storage can be considered equivalent to emission reductions must be at least several decades. For these reasons we believe that the temporary credits approach is the best.
- [110] This paragraph, requiring offset credits to be based on actual carbon stock changes as opposed to future expected carbon storage, should be maintained as it prevents a transfer of liability from credits owners to governments and taxpayers.