From: John Talberth <jtalberth@sustainable-economy.org>
Sent: Thursday, March 19, 2015 11:38 AM
To: chris@chrissmith.us; Anderson, Susan
Subject: Pembina bonding options

Dear Director Susan Anderson and Commissioner Chris Smith,

It was good to speak with you both about the bonding option for Pembina. Chris, we appreciate your asking the question about bonding and stranded assets during the meeting.

At the Center for Sustainable Economy, we think a wise policy to insure against risks being borne by communities at every step of the fossil fuel delivery process, from extraction, transport, storage, and export to combustion, is to make the polluter pay. This policy is enshrined in international law under the "polluter pays principle," in Principle 16 of the Rio Declaration on Environment and Development, which states: "National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment."

In this instance, Pembina is the polluter and the sudden release of the propane from the terminal in an accident, should it occur, could be catastrophic, as outlined in the White Paper submitted to your offices by the Northwest Citizens Science Initiative. And, for the record, please do note that, contrary to testimony from Pembina, an earthquake can lead to a BLEVE, as it did in the aftermath of the 9.0 Great Tohoku earthquake and tsunami in Japan. In this example, a large refrigerated propane tank would have made the BLEVE far worse. (See pp.s 28-29 of the NWCSI white paper.)

We think Pembina and all future export proposals, fossil fuel or otherwise, should be required to pay, up front, to guard against financial liabilities that could arise. The cost of the oil train derailment and explosion that occurred in Lac Magentic, Canada, has yet to be fully tallied, but, at last count, it exceeded $4 billion. This was in a relatively rural area. The highest insurance bond large rail carriers carry is $1 billion. Pembina's propane storage tank, should it explode in an earthquake, terrorist attack or other accident, would be orders of magnitude greater, both in damages and in costs. And Pembina would likely declare bankruptcy, leaving Portland stuck with the bill.

To be clear, we think a ban or moratorium on fossil fuel infrastructure for the city of Portland is the best route to take. But we also think, as a preventative measure, and to ensure that such a moratorium is fail-safe, a risk bonding approach makes sense.

Bonding is justified based on three categories of financial and economic risk the City faces: (1) catastrophic accidents; (2) abandoned infrastructure/stranded assets, and (3) other externalized costs that translate into City expenditures, including costs of meeting Climate Action Plan targets.

Given that there is a 1-in-8 chance of a 9.0 earthquake occurring in the Cascadia subduction zone in the next 50 years, a catastrophic accident over the life of this project is not idle speculation. Pembina suggested that its insurance arrangement with the Port would be sufficient to cover any liabilities that would arise associated with catastrophic accidents. This claim should be carefully scrutinized. As Sightline Institute has noted, and as experience with explosions at other propane facilities and along rail routes has demonstrated, "underinsurance is the norm"
(See: http://daily.sightline.org/2014/05/19/risk-assessment-for-railroads/). And of course none of the Port's coverage would extend to accidents along the rail line through North Portland. As James Beardsley of Marsh & McLennan notes, "[there is not currently enough available coverage in the

commercial insurance market anywhere in the world to cover the worst-case [train derailment] scenario," leaving public entities like the Port and the City vulnerable for most catastrophe-related costs. As such, bonds should be required to fill the insurance gap.

As for abandoned infrastructure/stranded assets, the City would face the considerable costs associated with dismantling, removing, and rehabilitation (DRR) of the affected lands and waters should Pembina have to shut the terminal down for economic reasons and should it default on its DRR obligations. It is not clear whether the Port is even requiring DRR at this point. Bonding for DRR is well-established in many if not most states. For example, in Oregon, the Energy Facility Siting Council (EFSC) requires financial assurances in association with large energy facilities such as Pembina's proposed terminal. See below for the bonding requirements the EFSC has in place for Jordan Cove. The full MOU is attached. The City should follow EFSC's lead and impose similar conditions on Pembina.

Another category of costs associated with the facility are the costs the City would face meeting the requirements of its Climate Action Plan. As you know, operation of the Pembina terminal will force the City to reduce emissions elsewhere to stay on track with its climate action goals. The costs of doing so, should you approve this terminal, should be paid for by Pembina, not the people of Portland. Again, Jordan Cove is a useful example. See the text in the MOU, attached. Here, EFSC is requiring Jordan Cove Energy Project (JCEP) to pay offset funds up front to The Climate Trust to mitigate emissions and help the State stay on track with its climate action goals. If PSC negotiates an up-front payment for expected life-cyle emissions that would be attributable to Portland, then this would be in lieu of bonding. But if a payment stream is negotiated or if liability for City CAP costs as they manifest is negotiated, then bonds would be needed to insure against default on those payments.

We would be happy to meet in person to discuss these options in more detail. We have also written a report on this topic which you can access here: http://sustainable-economy.org/climate-risk-bonds/.

All the best.

John Talberth, President, Chief Economist

Daphne Wysham, Climate Policy Fellow

Center for Sustainable Economy

Pertinent financial assurance language from Jordan Cove, EFSC MOU:

"(4) Before beginning any construction of the facility, JCEP shall submit a detailed engineering estimate of the cost to retire the facility and restore the site to a useful and non-hazardous condition, consistent with the site's zoning. The estimate shall include a discussion and justification of the methods and assumptions used to estimate the retirement and restoration cost. The information provided in the estimate shall substantially conform to the information requirements of OAR 345-021-0010(w).
An estimate prepared using the methodology developed for ODOE by Pacific Energy Services and generally used in the siting of EFSC jurisdictional facilities will be considered an acceptable method. A different method of estimation may also be acceptable subject to ODOE review.

(5) Before beginning construction of the facility, JCEP shall submit to the State of Oregon through ODOE a bond or letter of credit in the amount of the above estimate (in 2009 dollars) naming the State of Oregon, acting by and through the Department, as beneficiary or payee."

John Talberth, Ph.D.
President and Senior Economist
Center for Sustainable Economy
1294 14th Street
West Linn, Oregon 97068
(510) 384-5724
www.sustainable-economy.org