CENTER for HEALTH and the GLOBAL ENVIRONMENT
HARVARD MEDICAL SCHOOL

4 March 2011

Fred Hochberg, Chairman
Export-Import Bank of the United States
811 Vermont Avenue, N.W.
Washington, DC 20571

Dear Chairman Hochberg,

As lead author of a study recently published in the Annals of the New York Academy of Sciences: "Full Cost Accounting for the Life Cycle of Coal" (http://onlinelibrary.wiley.com/doi/10.1111/j.1749-6632.2010.05890.x/full) I am concerned with the enormous hidden costs associated with coal projects. In the study, I along with 11 colleagues, quantify the hidden human health and environmental impacts of coal, from mining to transport and combustion in coal power plants, and the air and water waste stream that accompanies these life cycle stages. We concluded that, in the United States (with a focus on Appalachia) that the life cycle effects of coal cost the U.S. public a third to over one-half trillion dollars annually.

I am therefore writing to urge you to incorporate all hidden costs of the proposed Kusile coal fired power project in South Africa when conducting environmental and financial due diligence and considering approval of the project.

Including these hidden costs will paint a comprehensive picture of the enormous costs of coal to society. Each stage in the life cycle of coal-extraction, transport, processing, and combustion generates a waste stream and carries multiple hazards for health and the environment. These costs are considered "externalities," as they are not borne by the coal industry. However, many of these so-called externalities take a very real toll on communities and are often cumulative in nature. Accounting for these damages doubles to quadruples the price of electricity from coal per kWh generated. When these costs are incorporated, the price of coal investments in energy efficiency, wind, solar, and other forms of non fossil fuel power generation become competitive.

In addition to the impacts of criteria air pollutants, emissions include mercury (48 tons annually in the US). Then there are impacts for the inhabitants of coal-field regions. The costs of climate change damages from coal-fired power (from black carbon (particulate matter), CO_2 and NO_x emissions), land disturbance in mountain top removal mining (soil and tree losses), and methane leakage from mines together amounts to some $64 billion dollars, or over 3 ¢/kWh (with low and high estimates of $21.3 billion

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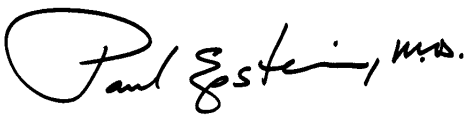
to $215.9 billion, or 1.06 ¢/kWh to 10.71 ¢/kWh, the range due to varying estimates of the impacts of climate change). A broad examination of the costs of climate change, as seen in The Stern Review of 2005, would mean even greater impacts: global economic losses range from 5 and 20% of global gross domestic product (ie, $1.75–$7 trillion in 2005 USD); the higher figure based on the potential collapse of ecosystems, such as coral reefs, and widespread loss of forests and crops. With coal contributing at least one-third of the heat-trapping chemicals, these projections offer a sobering perspective on the evolving costs of coal; costs that can be projected to rise (linearly or nonlinearly) over time. The study also concluded that the proposed technology of carbon capture and storage (aimed at controlling only one of the by-products of the entire process), is both risky and costly.

An eight-page brochure (executive summary) is also available at:
http://chge.med.harvard.edu/programs/ccf/documents/MiningCoalMountingCosts.pdf

Our comprehensive review finds that the best estimate for the total economically quantifiable costs in the U.S., based on a conservative weighting of many of the study findings, amount to one third of a trillion dollars annually adding close to 18 to 27¢/kWh for electricity generated from coal. The low estimate is $175 billion, or over 9¢/kWh, while the true monetizable costs could represent as much as $523.3 billion, adding close to 26.89¢/kWh.

I am writing, therefore, to urge the US Export-Import Bank (U.S. Ex-Im Bank) to include these costs to society when considering funding for Kusile—one of the world's largest coal plants. Based on the conclusions of our study, we believe that all hidden costs in the life cycle of coal must be included in deliberations concerning investments in new coal based projects. I strongly urge the US Ex-Im Bank to make a decision based on the consideration of the full costs of coal to society when considering project financing for the Kusile project.

Sincerely yours,



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