

Policy Brief

# Comprehensive Oil Pollution and Energy Security Trust Fund

Andrew Stevenson and Nigel Purvis\*

Updated: August 10, 2010

Climate Advisers 



## COMPREHENSIVE OIL POLLUTION AND ENERGY SECURITY TRUST FUND

The disaster in the Gulf of Mexico has highlighted for many policy makers the economic and environmental consequences of the United States' dependence on oil. In the coming months policy makers are likely to debate a variety of measures to deal with the disaster, including changes to liability rules, new safeguards for domestic offshore drilling, and re-organization of key oversight agencies. However, these new measures and existing policies fail to address many of the social costs (or "negative externalities") caused by the exploration, production, transportation and importantly consumption of oil. We propose imposing a fee on oil production and use equal to social costs of oil, and channeling the revenues from these fees through a "Comprehensive Oil Pollution and Energy Security Trust Fund". This fee would reduce oil consumption to more optimal levels. Revenues from the fund would be used to address the national security, economic and environmental costs to the United States from dependence on oil. The remainder of the paper discusses why this mechanism is needed, the existing law and policy context, potential funding sources and expected benefits.

### Comprehensive Oil Pollution Impacts on the United States

Petroleum exploration, production, transportation and consumption (domestic and international) imposes costs on the United States related to national security, economic growth, environmental protection and climate change that are not captured in the price of petroleum. These costs include:

- *National security threats:* The United States' dependence on oil imposes social costs related to U.S. national security. These costs include enriching and empowering leaders who threaten U.S. foreign policy goals and finance terrorism, undermining U.S. democracy and humanitarian objectives in oil-exporting nations and increasing the need for and cost of certain U.S. military interventions.<sup>1</sup>
- *Economic damage:* Low global prices of petroleum have been a driver of U.S. economic growth, but there is evidence that oil price fluctuations and increasing global demand affect the U.S. economy.<sup>2</sup> The U.S. National Renewable Energy Laboratory estimates that moderating global fossil fuel demand through clean energy cooperation could reduce domestic oil use costs \$10-50 billion per year by 2020 and provide \$25 billion per year in benefits from a stronger dollar and improved trade balance.<sup>3</sup>
- *Climate change:* Oil consumption is a major cause of global warming. In 2008 petroleum consumption was responsible for over one third of global energy-related climate change pollution<sup>4</sup>, which is already harming the United States and U.S. national interests abroad.<sup>5</sup> The impacts of climate change on the United States are already being felt in all regions, and include increased challenges to livestock and crop production, threats to human health and water stress.<sup>6</sup>
- *Deforestation:* Oil exploration and use is a major driver of deforestation in some parts of the world, including the United States. The roads needed to build oil wells, pipelines, refineries and shipment centers often open up intact forests to human settlement, which then leads to deforestation for ranching and farming. Researchers have also found that oil and gas exploration is a key driver of deforestation in the Ecuadorian and Peruvian Amazon, home to some of the most biologically rich tropical forests in the world.<sup>7</sup> In addition, some forest resources will be negatively affected by climate change impacts.<sup>8</sup>

While U.S. policy makers have proposed mechanisms to account for the direct impacts of spills on the United States, other mechanisms are needed to address the full scope of threats to the United States from oil exploration, production, transportation and consumption.

## Existing Law and Policy Context

Oil companies are currently held financially liable for the full costs of cleaning up their own oil spills, for natural resource and economic damages from their own oil spills up to \$75 million per spill, and for damages above this cap from all oil spills (not just their own) through an 8 cents per barrel fee on oil that is channeled to the Oil Spill Liability Trust Fund (which also has a per-spill cap on expenditures).<sup>9</sup> Recent policy proposals have targeted both increasing or eliminating the initial liability cap for natural resource and economic damages and increasing the per-barrel fee channeled to the Oil Spill Liability Trust Fund in order to raise revenues to pay for additional damages.

However, none of these policy proposals would provide new mechanisms to address the full range of social costs of U.S. reliance on petroleum, including those related to national security, economic impacts of dependence on petroleum, climate change adaptation needs, and deforestation caused by oil exploration and use. Current funding to address these costs is limited and comes through annual appropriations of general taxpayer revenues.

## New Proposal

### *Core idea*

The economically efficient way to address these costs is to impose new fees on oil production and use, through a “Comprehensive Oil Pollution and Energy Security Trust Fund” (COPE) with the mandate to fund programs or activities that address all of the social costs to the United States from oil.

### *How it would work*

Similar in structure to “Superfund” or the Oil Spill Liability Trust Fund, COPE’s primary components would be a dedicated source of revenue, revenue offsets, fees and penalties and a list of permissible uses. Each year revenues would automatically be channeled to the Fund through these mechanisms, and monies raised would be allocated to government programs through the appropriations process. These could include existing and new programs to address the costs of U.S. oil dependence, including U.S. national security, deforestation caused by fossil fuel exploration, production and consumption, resilience to climate change impacts, and technology and energy efficiency. Unappropriated monies would remain in the Trust Fund and be invested in interest bearing assets.

### *Funding Sources*

To maximize the economic efficiency of these programs, monies for the COPE could be raised entirely from new fees on oil use and the removal of certain tax preferences for oil companies. Options include per-barrel liability fee increases on all oil produced or consumed in the United States (each 1 cent increase would raise about \$70 million per year), per-barrel fees on imported oil (which could raise up to \$9.5 billion per year), revenues from an excise or income tax on windfall profits to oil companies (up to \$10 billion per year), redirecting harmful subsidies for fossil fuel industries (about \$45 billion over 10 years) or a new price on carbon pollution (which would raise tens of billions annually).<sup>10</sup> See Table 1 for a proposed funding mix and the Appendix for a proposed legislative framework.

Funding should go towards programs that address the full range of social costs imposed by U.S. oil dependence. These include:



- Existing or new energy efficiency and clean energy programs, including international cooperation programs
- Existing or new programs to prevent deforestation and improve resilience to climate impacts, including international cooperation programs
- Existing or new clean energy export promotion programs
- New programs to address national security threats of oil consumption

In order to be most effective in addressing this wide range of impacts, the Fund should allow contributions to domestic, bilateral and multilateral programs. Based on estimates of the revenue-raising potential of different mechanisms and annual needs in these areas, the Fund should aim to mobilize \$4 billion per year from 2011-2020.<sup>11</sup>

**Table 1: Funding Mix for Comprehensive Oil Pollution and Energy Security Trust Fund**

Sources	Revenue <sup>12</sup>
New 50 cent per barrel petroleum fee	\$20 billion over 10 years
Authorize appropriations of \$1 billion per year, offset by removing some fossil fuel subsidies	\$10 billion over 10 years
1% of auction revenues from a new carbon pricing mechanism	\$10 billion over 10 years
<b>Total</b>	<b>\$40 billion over 10 years</b>

#### *Estimated Benefits*

Specific benefits provided by COPE would depend on how funding is distributed among different uses and how much funding can be leveraged from other countries or institutions (such as for addressing deforestation). In addition, the costs and benefits of addressing national security threats and adapting to climate change are inherently difficult to quantify. However, assuming funding is divided equally between the four impacts discussed previously in this paper (each receives \$10 billion over 10 years or \$1 billion annually), the following benefits could be derived:

- *National security threats*: greater flexibility to pursue foreign policy objectives and a lower importance of protecting oil supply and supply routes in military intervention decisions.
- *Economic damage*: the United States could create 30,000 jobs in clean energy export industries, while reducing U.S. oil costs by \$1-3 billion per year.<sup>13</sup>
- *Climate change*: the United States could provide a down payment on climate change adaptation efforts, which are expected to require tens of billions annually by 2020.<sup>14</sup>
- *Deforestation*: the United States could help reduce greenhouse gas emissions from deforestation 400 million tons per year by 2015 with further reductions through 2020.<sup>15</sup>

## Appendix: Legislative Framework

The legislative framework for COPE would be simple, and include three main sections.

### **Establish the Trust Fund**

- List of taxes, fees or penalties appropriated to the Trust Fund (i.e. the taxes received under section x, y, z)
- List of permissible uses (i.e. to carry out the purposes of section x, y, z of the Senate oil pollution bill)
- Other authorities (i.e. borrowing, lending)

### **Revenue raising mechanisms**

- Modify Title 26, Section 4611 of the U.S. Code to include a new 50 cent per barrel financing rate for the Trust Fund
- Authorize general fund appropriations and remove specific fossil fuel subsidies to provide a revenue offset
- Other mechanisms, including carbon pricing, windfall profits taxes or fees on imported oil

### **List of permissible uses**

- Existing or new energy efficiency and clean energy programs, including international cooperation programs
- Existing or new programs to prevent deforestation and improve resilience to climate impacts, including international cooperation programs
- Existing or new clean energy export promotion programs
- New programs to address national security threats of oil consumption
- Bilateral or multilateral funds addressing any of these issues



## Notes

\* Andrew Stevenson is director of research and policy at Climate Advisers. Nigel Purvis is president of Climate Advisers and a visiting scholar at Resources for the Future. For further information please contact [stevenson@climateadvisers.com](mailto:stevenson@climateadvisers.com) or 202-328-5169

<sup>1</sup> Parry, I. (2009) *How Much Should Highway Fuels Be Taxed?*, Washington, DC: Resources for the Future.

Parry, I. and Darmstadter, J. (2003) *The Costs of U.S. Oil Dependency*, Washington, DC: Resources for the Future.

Friedman, T. (2006) *The First Law of Petropolitics*, Washington, DC: Foreign Policy.

<sup>2</sup> Some scholars have found that the socially optimal gasoline tax due to economic damages from U.S. oil dependence should be \$0.10 per gallon.

See Leiby, P. (2007) *Estimating the Energy Security Benefits of Reduced U.S. Oil Imports*, Oakridge National Laboratory, ORNL-TM-2007-028.

Parry, I. (2009)

Balke, N.S., Brown, S. and Yücel, M. (2010) *Oil Price Shocks and U.S. Economic Activity An International Perspective*, Washington, DC: Resources for the Future.

<sup>3</sup> National Renewable Energy Laboratory (2008) *Strengthening U.S. Leadership of International Clean Energy Cooperation: Proceedings of Stakeholder Consultations*, Golden, CO.

<sup>4</sup> U.S. Energy Information Administration (2010) *International Energy Statistics*, Washington, DC.

<sup>5</sup> United States Global Change Research Program (2009) *Global Climate Change Impacts in the United States*, New York, NY: Cambridge University Press.

<sup>6</sup> United States Global Change Research Program (2009)

<sup>7</sup> Finer M, Jenkins CN, Pimm SL, Keane B, Ross C. (2008) *Oil and Gas Projects in the Western Amazon: Threats to Wilderness, Biodiversity, and Indigenous Peoples*. PLoS ONE 3(8): e2932. doi:10.1371/journal.pone.0002932

<sup>8</sup> Sedjo, R. (2010) *Adaptation of Forests to Climate Change: Some Estimates*, Washington, DC: Resources for the Future.

<sup>9</sup> There are several exceptions to the \$75 million per spill liability cap and in certain cases additional fines can be imposed. For a full overview of oil spill liability law see Richardson, N. (2010) *Deepwater Horizon and the Patchwork of Oil Spill Liability Law*, Washington, DC: Resources for the Future.

<sup>10</sup> Based on the authors' analysis and several publications.

See Weiss, D.J., and Lyon, S. (2010) *Powering an Oil Reform Agenda*, Washington, DC: Center for American Progress.

Allaire, M. and Brown, S. (2009) *Eliminating Subsidies for Fossil Fuel Production: Implications for U.S. Oil and Natural Gas Markets*, Washington, DC: Resources for the Future.

S. 3309 (111<sup>th</sup> Congress) introduced by Senators Mark Begich (D-AK) and Lisa Murkowski (R-AK).

<sup>11</sup> Estimates of funding needs for addressing the impacts of oil exploration, production, transportation and consumption vary widely, and are almost certainly greater than revenues that could be made available through an energy or oil pollution bill. The incremental cost of investing in clean as opposed to polluting technologies is estimated at \$180 billion per year by 2030, with about half in developed nations. Reducing global deforestation 50% is estimated to cost \$20-30 billion per year by 2020. Based on deforestation rates in countries where oil and gas exploration is a primary driver, at least 3% of this total funding is needed to address deforestation caused by these activities. Building resilience to climate impacts is estimated to cost tens of billions per year by 2020, divided equally between developed and developing countries.

Project Catalyst (2009) *Scaling Up Climate Finance*, San Francisco, CA: ClimateWorks Foundation.  
Deveny, A., Nackoney, J. and Purvis, N. (2009) *The Forest Carbon Index*, Washington, DC: Climate Advisers and Resources for the Future.  
United Nations Framework Convention on Climate Change (2007) *Investment and Financial Flows to Address Climate Change*, Bonn, Germany. [http://unfccc.int/files/cooperation\\_and\\_support/financial\\_mechanism/application/pdf/background\\_paper.pdf](http://unfccc.int/files/cooperation_and_support/financial_mechanism/application/pdf/background_paper.pdf)

<sup>12</sup> See Senate Finance Committee (2010) and U.S. Environmental Protection Agency (2010) *EPA Analysis of the American Power Act of 2010*, Washington, DC.

<sup>13</sup> Export promotion and oil cost estimates extrapolated from larger figures from the U.S. National Renewable Energy Laboratory. See National Renewable Energy Laboratory (2008) *Strengthening U.S. Leadership of International Clean Energy Cooperation: Proceedings of Stakeholder Consultations*, Golden, CO.

<sup>14</sup> United Nations Framework Convention on Climate Change (2007)

<sup>15</sup> According to the report of the Informal Working Group on Interim Finance for REDD+, approximately \$20 billion globally will be needed to reduce deforestation 25% (about 1.6 billion tons per year) by 2015. See Informal Working Group on Interim Finance for REDD+ (2009) Report of the *Informal Working Group on Interim Finance for REDD+*. [http://www.regjeringen.no/upload/MD/Vedlegg/Klima/klima\\_skogprosjektet/iwg/Report%20of%20the%20Informal%20Working%20Group%20on%20Interim%20Finance%20for%20REDD+%20IWG%20IFR\\_Final.pdf](http://www.regjeringen.no/upload/MD/Vedlegg/Klima/klima_skogprosjektet/iwg/Report%20of%20the%20Informal%20Working%20Group%20on%20Interim%20Finance%20for%20REDD+%20IWG%20IFR_Final.pdf)

