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Phasing Out Federal Subsidies for Coal

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I will work with my colleagues at the G-20 to phase out fossil fuel subsidies so that we can better address our climate challenge.

– President Barack Obama, September 22, 2009

I. Executive Summary

In his 2010 State of the Union Address, President Obama emphasized the importance of fostering low carbon resources, of developing comprehensive energy and climate legislation, and of seeking innovation in the energy sector. Indeed, this Administration, with an impressive team of climate change experts, has pushed forward in the transition to a low carbon economy more than any other prior Administration.

The purpose of this report is to urge consistency in the development and implementation of federal administrative policies. Even as President Obama has pledged to phase out fossil fuel subsidies, the Federal Government prepares to establish limits on greenhouse gas emissions, and the Administration fosters a transition to a low carbon economy, some Federal agencies continue to have policies and programs that provide substantial subsidies for the construction, expansion, and life extension of one of the largest sources of greenhouse gas emissions in the U.S. - coal-fired power plants. Federal administrative financial policy details and implementation, and the use of taxpayer dollars, are not yet consistent with President Obama's pledges to the G-20 or the Administration's efforts to move away from carbon intensive technologies. Nor do these federal policies minimize taxpayer exposure to risks associated with carbon intensive technologies.

Most recently, the President's FY 2011 Budget proposal anticipates federal policy constraining carbon emissions with a cap-and-trade placeholder, reduces federal tax breaks for conventional fossil fuels, increases direct spending on clean energy, and funds a mandatory greenhouse gas reporting system at the Environmental Protection Agency (EPA). At the same time, President Obama has signed an Executive Order establishing emission reductions goals for federal agencies.¹ Further, the U.S. Treasury Department has issued guidance to multilateral development banks (MDBs) stating that lending policies should foster planning for and development of no or low carbon energy sources rather than funding conventional coal-fired facilities (December 14, 2009).²

However the United States continues to provide financial support to the World Bank and other international financial institutions that finance fossil fuel extraction and use around the world, as well as continuing to subsidize coal plant construction and retrofit through the Rural Utilities Service, Department of Energy, and Treasury Department domestically. This situation is troublesome for several reasons. First, federal policies and agencies are working at cross-purposes when efforts to reduce emissions proceed simultaneously with financial assistance for projects that could increase emissions. Second, investments in new long-lived carbon-intensive capital projects are likely to raise

¹ Executive Order 13514, December 2009.

² US Department of Treasury; *Guidance to MDBs for Engaging with Developing Countries on Coal-Fired Power Generation*; December 14, 2009.

overall costs of complying with carbon restrictions. Finally, financial assistance to coal-fired power under current financial, industry, and regulatory circumstances places taxpayer dollars at risk.

There are four primary areas where federal financial practice provides billions of dollars to the coal industry and fossil fuels beyond the tax breaks already slated for reduction in the President's budget, in contradiction to emerging federal policy on reducing carbon emissions:

- 1) Financial support for the World Bank and other international financial institutions that finance fossil fuel use and extraction;
- 2) U.S. Treasury Department's backing of tax-exempt bonds and federally subsidized taxable Build America Bonds for use in the electric sector;
- 3) U.S. Department of Agriculture's Rural Utilities Service provision of loans, loan guarantees, and lien accommodations to public power companies that are investing in new or existing coal plants; and
- 4) Tax credits, loans, and loan guarantees through the U.S. Department of Energy.

II. Coal in Transition

Industry and the federal government are making strong efforts to transition to a low carbon economy. It is inevitable that there will be limits on carbon dioxide and other greenhouse gas emissions within the lifetime of any coal-fired power plant that is constructed or retrofitted in 2010 or later.

Congress is poised to enact legislation that would reduce greenhouse gas emissions through a federal cap on greenhouse gas emissions and trading emissions allowances, or through other means. Legislative proposals and the President's initiatives aim to reduce greenhouse gas emissions by approximately 80% from current levels by 2050. But even if Congress fails to adopt a legislative greenhouse gas policy, the EPA is prepared to mandate emissions reductions following the Supreme Court's determination that the harms associated with climate change are serious and well-recognized, that greenhouse gases fit within the Clean Air Act's definition of "air pollutant", and that the EPA has the authority to regulate greenhouse gases. As a first step, the EPA issued a finding that greenhouse gases endanger public health and welfare.³ The EPA has also developed

³ On December 7, 2009, EPA Administrator Lisa Jackson signed two distinct findings, the Endangerment Finding and the Cause or Contribute Finding regarding greenhouse gases under 202(a) of the Clean Air Act. Endangerment findings to be published in the Federal Register under Docket ID No. EPA-HQ-OAR-2009-0171 pre-publication text available at: <http://www.epa.gov/climatechange/endangerment/downloads/FinalFindings.pdf>. Environmental Protection Agency, *40 CFR Chapter 1 Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act; Proposed Rule*; Federal Register, Vol. 74, No. 78, April 29, 2009.

regulations to limit any greenhouse gas emission permitting requirements to the largest industrial sources, as well as regulations that boost automobile and truck fuel efficiency and contain the first-ever greenhouse gas tailpipe standards for vehicles.⁴

Furthermore, the Federal Courts have allowed common law nuisance actions to go forward against some of the nation's largest owners and operators of fossil fueled facilities. In those actions, plaintiffs successfully stated a cause of action for harm suffered as a result of defendants' carbon intensive activities that contributed to climate change.⁵

Regulation of greenhouse gases will increase the cost of producing electricity from coal due either to the direct cost of reducing emissions or to the cost of purchasing emissions allowances. Though it is certain that emission-related costs will increase, the nature and magnitude of the cost increases are uncertain and thus introduce financial risk into decisions to invest in long-lived capital-intensive resources that use carbon-intensive fuels.

There are additional factors in the electric sector that further increase the financial risks associated with coal plant investments: coal plant construction costs have skyrocketed since the early years of this decade; forecast energy demands have declined significantly; the cost of cleaner energy options such as wind, solar, and natural gas have become much more competitive; and there is increasing recognition that other costs associated with the use of coal also need to be considered in resource planning. These additional costs include the health impacts of the emissions of fine particulate matter, ozone, mercury and other hazardous pollutants, the cost of safely handling and storing the huge volumes of coal combustion wastes created each year by operating coal-fired power plants, and destructive coal mining practices.

For example:

- What appear to be structural changes in the comparative prices of natural gas versus coal have dramatically altered the options for power generation professionals. The estimated domestic U.S. reserves of natural gas have increased by more than 30 percent in the past two years – meaning that

⁴ Greenwire; *EPA proposal could shield small emission sources*; September 2, 2009. E&E News PM, *Draft vehicle efficiency, emissions rules sent to White House*; August 26, 2009.

⁵ Greenwire News Alert; *Federal court approves long-stalled nuisance lawsuit against power companies (09/21/2009 at 05:58 PM)*; September 21, 2009. See *State of Connecticut v. American Electric Power, et al*, *F3d*. (2d Cir. Sept. 21, 2009)(reversing the 2005 District Court decision finding that plaintiffs did not have standing to bring a case of nuisance against AEP for harm suffered as a result of AEP's activities that contribute to climate change); See also, "Comer v. Murphy Oil, 2009 WL 3321493 (5th Cir. Oct. 16, 2009)(plaintiffs alleged that the defendant's petro-chemical companies caused the greenhouse gas emissions and contributed to the global warming responsible for the severity of Hurricane Katrina) ; See also, *Native Village of Kivalina v. ExxonMobil Corporation*, Case No. C 08-1138 SBA, slip op. (ND. Cal. Sept. 30, 2009). (addressing plaintiff's success in stating a cause of action as to whether or not plaintiffs raised a non-justiciable political question and whether or not plaintiffs successfully demonstrated Article II standing. activities contributing to climate change.)

gas can increasingly be relied upon as an affordable transition fuel to a lower carbon future. In some areas of the U.S., coal-fired units have been displaced by gas-fired generation due to low natural gas prices.

- In February 2009, the United States Geological Survey issued a report that significantly reduces the level of economically recoverable coal reserves in the United States.⁶ The Energy Information Agency, the federal agency responsible for publishing the only authoritative numbers regarding coal reserves in the country has said it agreed with the study and is designing a new baseline reserve number.⁷ With rapid depletion of coal capacity in Central Appalachia and planned, intensified production in the Powder River Basin, long-term pressure on coal prices are likely to further undermine coal's economic competitiveness as a domestic fuel source for power generation.
- In December 2008 a major ash spill occurred in Kingston Tennessee at an ash pond owned by the Tennessee Valley Authority (TVA). The spill set in motion a series of federal, state and local actions that are expected to lead to the promulgation of federal regulations to more strictly classify and monitor the handling and disposal of coal ash from coal-fired power stations. The coal industry has resisted the proposed regulations in large measure because of the anticipated costs. The risk for federal, state and local officials who must consider financial investment in new or existing coal plants is whether, and what kind of coal ash regulation is likely to occur in the future. Energy planners must take into consideration all of the risks with coal plant planning and compare them with the risks and costs of alternatives when planning.

These risks have led to the cancellation of more than 120 proposed coal units in recent years and have raised serious doubts about the long-term economic and environmental viability of hundreds of existing coal plants.

For example, Progress Energy of North Carolina has decided to close eleven existing coal-fired power plants representing 1500 MW. The plants, constructed during the 1950's through 1970's do not have modern pollution control equipment. The company could not justify new investments to its shareholders or to its customers. According to the company: "Installing emission controls on older, smaller coal-fired units is expensive, including hundreds of millions of dollars per unit for flue-gas desulfurization equipment (scrubbers) and additional expense for other technologies. Current and expected legislation affecting various pollutants will continue to increase the cost of coal-fired generation, particularly at smaller, older plants."⁸ The Company also has indicated that it will be considering further coal unit retirements as part of its upcoming resource planning

⁶ United States Geological Survey, *Assessment of Coal Geology: Resources and Reserves in the Gillette coalfield Powder River Basin, Wyoming*, Open-File Report 2008-102.

⁷ Rebecca Smith, *U.S. Forsees a Thinner Cushion of Coal*, Wall Street Journal, June 8, 2009.

⁸ Progress Energy, *Company Press Release: Progress Energy Carolinas plan to retire remaining unscrubbed coal plants in North Carolina*, December 1, 2009.

analyses. Other utilities, such as Duke Energy also have announced plans to retire some aging coal-fired units over the coming years.

The financial community increasingly recognizes the risks associated with the construction of new and the continued operation of existing coal-fired power plants. For example, Standard and Poor's recently published two reports on the future of energy investment in the United States in a post carbon legislation world. One of these reports charted an investment trajectory that envisions a decline in the use of coal-fired generation from the current 50% to 33% by the mid 2020's.⁹

The second Standard and Poor's report summarized the reasons for an expected decline in coal's investment potential as a source of fuel for power generation:

Lower capacity factors at coal plants – As fuel switching becomes a widespread compliance strategy, most coal plants will have lower capacity factors. This will imply more start-up and shut-down costs, as well as the need to recover a coal plant's higher fixed costs from fewer megawatt-hours (MWh). From an operational perspective, this creates a need to manage fleet dispatch differently, while from a financial perspective, it can steeply reduce the operating margins of coal plants. Ratepayers of regulated utilities may need to cover the same fixed costs over fewer MWh's, contributing to rate pressures.¹⁰

Some parts of the federal government have recognized these risks. For example, the Rural Utilities Service of the Department of Agriculture, which has been subsidizing the power sector for decades, has acknowledged that the assumptions used to justify new coal plants are 'speculative'. In fact, the RUS issued a moratorium in March 2008 that halted direct loans for new coal-fired power plants citing the lack of an appropriate subsidy rate to reflect the risks associated with the construction of new baseload generation.¹¹ They decided that the direct use of taxpayer dollars for investments in coal was too risky.

It is clear that any investor owned company, public owned utility or electric membership organization or power supply agency that relies on coal generation for a significant portion of its energy portfolio is increasing its long-term liability. The financial risks associated with continued investment in coal grow as the degree to which companies depend on coal increases - financial stress is more likely for companies with larger carbon-intensive generation mixes.¹² Federal investment and/or financial assistance for investment in coal at this time also places taxpayer money at risk. The rising costs of constructing and operating coal-fired power plants, decreasing ratepayer tolerance for utility rate increases and open-ended long term liabilities, including uncertainty as to the

⁹ Standard and Poor's, *Potential Credit Impact*, *Op Cit*, p.2.

¹⁰ Standard and Poor's, *Cap-and-Trade and U.S. Power Profitability*, *Op Cit*, p.5.

¹¹ See Letter of James M. Andrew, Administrator, Utilities Program, United States Department of Agriculture, Rural Development, to the Honorable Henry A. Waxman, March 11, 2008 available at <http://oversight.house.gov/images/stories/documents/20080312104146.pdf> .

¹² See for example: Standard and Poor's, *How Cap-and-Trade Will Affect U.S. Power Markets And Merchant Generators' Profitability*, September 14, 2009 and *The Potential Credit Impact of Carbon Cap-and-Trade Legislation On U.S. Trade Legislation ON U.S. Companies*, September 14, 2009.

utilities' ability to repay their loans, all contribute to a high risk profile inappropriate for taxpayer money.

III. Federal Subsidies for Coal

Despite this Administration's efforts to transition to a low carbon economy, there remain certain federal administrative policies and practices in place that subsidize the continued operation of existing coal, or the development of new high carbon emission coal plants. This section describes programs in international finance, the Treasury Department, the Agricultural Department and the Energy Department that warrant change to be consistent with an overarching goal of a clean energy economy.

The World Bank and other International Finance Institutions

The United States is the single largest contributor to the World Bank and a major supporter of other international financial institutions such as the Inter-American Development Bank and the African Development Bank. The United States also provides subsidized financing internationally through the Overseas Private Investment Corporation and the U.S. Export Import Bank. Together, international financial institutions have helped finance 88 new and expanded coal plants since the United Nations Framework Convention on Climate Change came into effect in 1994, providing more than \$137 billion in direct and indirect financial support for new coal-fired power plants.¹³ The U.S. Treasury has issued guidance to multilateral development banks (MDBs) stating that lending policies should foster planning for and development of no or low carbon energy sources rather than funding conventional coal-fired facilities (December 14, 2009).¹⁴ However, as long as the World Bank and other international financial institutions continue to provide financing for fossil fuel extraction and use, U.S. support is a subsidy that should be phased out consistent with the President's pledge to the G-20.

The World Bank's own Extractive Industries Review recommended several years ago that the Bank withdraw from financing coal or oil development. However that recommendation has been ignored by the Bank's management.¹⁵ According to the International Energy Agency, without a decisive reorientation of international energy investment away from carbon intensive sources in developing countries and economies in transition, atmospheric carbon dioxide will overshoot the tipping point for catastrophic global warming, even if the industrialized countries such as the U.S. were to completely eliminate their global warming pollution by 2030.¹⁶

Two recent examples of World Bank support for new coal plants include:

¹³ http://www.edf.org/documents/9593_coal-plants-report.pdf.

¹⁴ US Department of Treasury; *Guidance to MDBs for Engaging with Developing Countries on Coal-Fired Power Generation*; December 14, 2009.

¹⁵ <http://siteresources.worldbank.org/INTOGMC/Resources/finaleirmanagementresponse.pdf>

¹⁶ <http://www.iea.org/weo/2008.asp>.

- The 4,000 MW Tata Mundra Ultra Mega coal project in India. The World Bank and the Asian Development Bank provided financial support for construction of one of the largest coal plants in the world in 2008. It is scheduled to complete construction in 2012.
- South African power company Eskom's proposed 4,800 MW Medupi coal plant, one of the largest in the world. The World Bank has approved more than \$3 billion and the African Development Bank also provided more than \$500 million in financial support for the project.

The World Bank and other international financial institutions are presently requesting additional funds – a general capital increase - to continue ramping up their lending, and the Bank in particular is positioning itself to play a major role in managing climate finance after the Copenhagen Accord. The U.S. government should take aggressive action to make the World Bank follow the recommendation of its own Extractive Industries Review and withdraw from financing coal development. If the Bank refuses to do so and, instead, approves projects like the proposed Eskom coal plant in South Africa, the U.S. should phase out our support, starting with the rejection of additional funds as part of the requested general capital increase and continuing with a refusal to reauthorize the Clean Technology Fund under the Bank's purview.

U.S. Treasury Department: Tax-exempt and Build America Bonds

The Treasury Department's financial policies currently result in subsidies to owners and developers of coal-fired power plants. Two practices in particular, tax-exempt financing and interest subsidies for certain bonds, place millions of taxpayer dollars at risk due to coal plant investments.

Traditionally, federal tax-exempt funding has been reserved for low risk activities. Though in the past coal-fired power plants have been considered low-risk investments, this is no longer a reasonable presumption. Uncertainty about the costs of greenhouse gas and other pollutant regulations on top of uncertainty about construction costs means that tax-exempt funding and federally subsidized taxable funding for coal-fired power plants would be supporting projects with a high degree of financial risk. The risks are even greater if the funding goes towards first generation technologies such as those proposed for some of the new power plants. Using tax-exempt or federally subsidized taxable funding for such speculative projects could rattle the bond market. Given the risks inherent in coal plant investments, particularly those associated with first generation technologies, the federal government should not be using tax-exemption and interest subsidies for coal-fired power plants. However, if such financial practices continue, at a bare minimum, the Federal Government must ensure that disclosure of the financial risks associated with investment in coal-fired power generation is robust and sufficient to permit informed investment and mitigate bond market impacts.

Tax-exempt financing is a federal tool used by states and local public authorities to provide billions of dollars in subsidies to build new coal plants and extend the life of

existing coal plants. The federal government provides financial assistance to eligible utilities that operate coal-fired power plants through tax-exempt financing, commonly referred to as tax-exempt bonds or municipal bonds. Currently there is no policy coordination of tax-exempt financing with efforts to move to a carbon constrained economy.

Under Internal Revenue Code (Section 103(a)) the interest earned on any state or local bonds is not included in gross income and is therefore exempt from federal income tax.¹⁷ This policy results in a revenue loss to the federal government since interest earned by investors is not included in federal income taxes. State and local governments use tax-exempt bonds to finance a variety of investments, including investments in power plants and transmission lines.¹⁸ Rural Electric Cooperatives that may provide generation and transmission of power are tax-exempt entities organized under IRC 501(c)(12) and may use the tax-exempt bond market to finance activities permitted by the Code. The Treasury Department oversees the tax-exempt bond market activities of state and local governments as they pursue a wide range of public infrastructure projects, including the construction and maintenance of power plants.

Examples of new or proposed coal-fired power plants that are funded in part by tax-exempt debt include the following:

- The Prairie State Energy Campus Project in Illinois is a mine-mouth 1600 MW supercritical steam turbine power plant without carbon capture technology. Construction is all but completed in large measure using tax-exempt debt. This more than \$4 billion plant has several participating partners. One partner, the Northern Illinois Municipal Power Agency (NIMPA), is buying 120 MW of the 800 MW. Its portion of the project is \$318 million, of which \$303 million is financed with tax-exempt debt.¹⁹
- The Longleaf Energy Station in Georgia is a proposed 1200 MW pulverized coal-fired power plant. The Early County (Georgia) Development Authority is supporting the plant with federally backed local development bonds. The developer, LS Power, is currently seeking to secure approvals for air permits.
- The Two Elk coal plant in Wyoming is a proposed coal plant that purports to use so-called “waste coal”. The project has received hundreds of millions of dollars in tax-exempt debt authority since it was classified as a solid waste recycling facility. Approval for the tax-exempt financing is currently being audited by the Internal Revenue Service.

¹⁷ See 26 U.S.C §103(a) ; The interest on the bonds may also be exempt from the state and local taxes of the governments that issued the bonds.

¹⁸ GAO-08-364: *Tax Policy: Tax-exempt Status of Certain Bonds Merits Reconsideration, and Apparent Noncompliance with Issuance Cost Limitations*, February 2008, pp. 5-9. Report prepared at the request of Senators Baucus and Grassley of the Senate Committee on Finance.

¹⁹ Northern Illinois Municipal Power Agency (NIMPA), \$303,575,000 Power Project Revenue Bonds, Series 2007A, and \$15,175,000 Power Project Taxable Bonds, Series 2007B (Prairie State Project). Official Statement, August 15, 2007.

Recently, state public power authorities in South Carolina (Santee Cooper), and American Municipal Power in Ohio (AMP) cancelled approximately 2,000 MWs of new coal-fired power. Both projects were to be financed with tax-exempt debt. The entities gave several reasons – a general reduction in demand from the recession, rising construction costs, new costs from federal carbon legislation and planned demand reductions based on local issues.

Tax-exempt debt for use in the electric sector is only a small portion of the total amount of tax-exempt financing. Of the \$2.05 trillion identified by the Government Accountability Office (GAO) in tax-exempt debt issued between 2002 and 2006, \$81 billion, or 3.9% percent, was for electric power. However, as the nation moves forward with programs to reduce emissions of carbon dioxide and other greenhouse gases, federal policy is working at cross purposes where it continues to finance the construction and maintenance of carbon intensive coal-fired power plants. Like all of the federal subsidies discussed in this report there is investment risk that is not being discussed at the federal level, and only sparingly discussed at the state and local level. Tax-exempt financing is often used in conjunction with other state and local incentives, compounding the risk to taxpayers.²⁰

A new program expands the U.S. Treasury’s use of financing tools to subsidize coal-fired power plants. As part of the American Recovery and Reinvestment Act (ARRA)²¹ the federal government, under the oversight of the Treasury Department launched the Build American Bonds (BABs) program to provide interest subsidies to encourage the construction of infrastructure. Under the program, issuers of the taxable bonds are provided a 35% direct pay interest subsidy to reduce the costs of borrowing.

Unfortunately, the same power companies that have been eligible for tax-exempt bond financing for the construction and maintenance of coal-fired power plants also are eligible for funding under BABs. For example, prior to the financial crisis, American Municipal Power used the tax-exempt bond market to finance the construction of the Prairie State Energy Campus in Illinois. After the financial crisis began, AMP issued through the BABs program nearly \$500 million dollars of federally subsidized taxable bonds to finance the last phases of construction of a coal-fired power plant.²² This is another instance where federal financing initiatives are at cross purposes with efforts to encourage the transition to a low carbon economy.

A House Ways and Means Committee report on the Build America Bonds program includes a breakdown by state, project, and amount issued.²³ Many of the issuers who

²⁰ See State of Illinois, Department of Commerce and Economic Opportunity, *Siting New Coal-Fired Power Plants: A Guide to Permits and Economic Incentives*, Report of the Office of Coal Development, Revised September 2005.

²¹ American Recovery and Reinvestment Act of 2009, Pub L. No. 111-5.

²² See the Official Statement of American Municipal Power’s Prairie State Energy Campus Project available at <http://emma.msrb.org/EP329787-EP35584-EP657662.pdf>.

²³ See United States Cong. House, Ways and Means Committee. Markup of H.R. 4849, Small Business and Infrastructure Jobs Tax Act of 2010, March 17, 2010, 111th Cong. 2d sess.

would have been eligible under the RUS loan program instead issued hundreds of millions of federally taxable bonds. Funding for the Prairie State Energy Campus (PSEC) lead by AMP, has been by far the biggest beneficiary under the program to date.

A partial list of issuances for new coal over \$100 million dollars includes:

American Municipal Power Ohio	\$396 million (PSEC)
State of Illinois Municipal Electric Agency	\$295 million (PSEC)
Northern Illinois Municipal Power Agency	\$120 million (PSEC)
Missouri Joint Municipal Electric Utility Comm.	\$194 million (PSEC)
Nebraska (Whelan Energy Center)	\$185 million

A partial list of issuances to fund scrubber technology for existing coal plants includes:

City of Colorado Springs (Utility Improvements)	\$64 million
City of Gainesville Florida	\$157 million
JEA (Florida)	\$115 million
City of Hamilton Ohio	\$15 million

Under the first phase of the program, the federal government pays a 35% direct pay interest subsidy on the interest rate for the bonds. The program was due to expire December 2010 but the Smart Business and Infrastructure Jobs Tax Act of 2010,²⁴ that was introduced in the House on March 16, 2010, extends the program through 2013. The bill was referred to the Senate Finance Committee on March 26, 2010.

Coal-fired power plants are the largest emitters of greenhouse gas in the world. For this reason, it is not appropriate that federal policy favors these plants with publicly subsidized financial advantages. To compound the problem, continued support for coal-fired power plants through the bond market at this time could lead to problems in the future if plant owners later seek exemption from requirements to install greenhouse gas emissions controls. Such a result would clearly fly in the face of efforts to achieve cost-effective emissions reductions.

Ceasing the use of tax-exempt financing and federally subsidized taxable funding for coal-fired power plants would be the simplest way to align the Treasury's financing policies with the Administration's efforts to move to a low carbon economy while maintaining stability in the bond market. To do otherwise fosters a gross misuse of taxpayer dollars and exposes the bond market to a degree of risk that is often under reported in municipal bond disclosure documents. Insufficient disclosure may be a

http://waysandmeans.house.gov/media/pdf/111/Build_America_Bonds.pdf. The Ways and Means Committee Report does not contain project descriptions; however a project's official statement is available in the EMMA database under the issuer's name (<http://emma.msrb.org>). In some instances, projects listed as Electric Light & Power Improvements contain a coal generation element.

²⁴ The Smart Business and Infrastructure Jobs Tax Act of 2010, H.R. 4849, 111th Con., 2d Sess. (2010).

precursor to turbulence in the bond market which in turn could affect interest rates as well as the terms and conditions of deals throughout the bond market.

Given the financial and emissions cost risks associated with tax-exempt financing of coal-fired power plants, there are important issues pertaining to whether investor disclosure documents portray coal investment risks adequately. For example, what are the appropriate disclosure practices in the bond market given:

- The rise in coal plant constructions costs?
- The range of financial risk associated with regulation of greenhouse gasses, criteria pollutants, hazardous pollutants, and coal combustion waste?
- The cumulative impact of cost increases and regulatory uncertainty?
- Extraordinary and ongoing changes in the coal industry?

One particular problem that arises in disclosure in the municipal bond market stems from issuers' use of multiple and varying information sources and accounting methods.

On September 8, 2009, representatives of the Sierra Club and two consultant organizations involved with climate change work submitted comments proposed amendments to SEC Rule 15c 2-12 specifying materiality requirements to municipal bond disclosures published in Release No. 34-0332; File No. S&-15-09 Proposed Amendments to Municipal Securities Disclosure.²⁵ The comments specifically ask for interpretative guidance that would improve disclosure to investors regarding climate risk in the offering and continuing disclosure documents of municipal bonds.²⁶

...Growing evidence supports the conclusions of state officials, fiscal managers, and investor advocates that the litigation, financial and regulatory responses to carbon mitigation efforts will materially impact the fiscal soundness of publicly traded companies and must be disclosed to investors.

Yet despite clear evidence of materiality for publicly traded companies, these proposed rules are silent concerning the need for climate risk disclosure in municipal bond documents. Some of the largest contributors to greenhouse gas emissions are coal-fired power plants operated and supported by tax-exempt rural cooperatives, municipal utilities, and finance authorities which utilize the municipal bond market and are exempt from the registration requirements of the Securities Act of 1933 and the periodic filing requirements of the Securities and Exchange Act of 1934. These entities are equally as likely, and in many cases even more likely, as their publicly traded counterparts to bear increasing regulatory and fiscal impacts in response to climate change and related state and regional carbon mitigation efforts.

²⁵ Letter to Elizabeth M. Murphy, Secretary; From: Tom Sanzillo, Senior Associate, TR Rose Associates, Mark Kresowik, Corporate Accountability Representative, Sierra Club; and Lisa Hamilton, Counsel, September 8, 2009 available at <http://www.sec.gov/comments/s7-15-09/s71509-21.pdf>.

²⁶ This issue is discussed in Andrew Ackerman, "Climate Disclosure Sought"; The Bond Buyer; January 13, 2010 and Letter to the Editor in The Bond Buyer, January 19, 2010.

The Securities and Exchange Commission recently issued Interpretive Guidance on existing SEC disclosure requirements for publicly traded companies as they apply to business or legal developments relating to the issue of climate change.²⁷ The SEC's guidance, the conflicts between federal energy and environmental policy initiatives and the use of tax-exempt bonds for the development of new coal-fired power plants, raise important questions pertaining to diligence in the bond market. For example, should there be a uniform set of protocols for bond issuers, credit rating agencies, and/or underwriters? Further, what risks are there that rapidly changing market conditions are undermining the ability of issuers to meet disclosure standards?

The oversight of local government officials has traditionally provided a check on disclosures of power authorities and coal plant developers. However, the extraordinary complexity of market conditions, and the challenge of providing accurate financial information under current circumstances, undermine the meaningfulness of local government officials' oversight and hinder their ability to determine the prudence and reasonableness of coal plant investments.

Coal-fired power plants are a risky investment at this time due to the likelihood of significant costs associated with regulating greenhouse gas emissions. Yet these and other risks associated with coal-fired power plants are not disclosed in a transparent fashion to investors who buy tax-exempt bonds or the federally subsidized taxable BABs. Risk scenarios include the possibility that a project could be cancelled during construction due to costs increases that were not anticipated, or that new carbon emission regulations could trigger a restructuring of financing, which would be traumatic for the bond market. Those affected could include individual households, commercial banks, property and casualty companies who typically invest in mutual funds.²⁸ These investors are less likely to be fully informed of the underlying risks of their investments as municipal bonds suffer from even less transparent disclosure than other investments.²⁹

More than 120 coal-fired power plants have been cancelled across the country in the past four years, in part because the financial risks are too great to proceed. The nation's tax-exempt bond market and the availability of taxable BABs provide relatively unfettered market access to state and local development entities to proceed with projects, including coal-fired power plants. Those entities that continue to pursue coal-fired power plants in the current environment are not acting in a prudent manner. The Treasury Department must intervene with appropriate action to protect investors and other stakeholders, like municipal electric systems. The intervention must first focus on preventing any currently planned transactions from going forward until a climate bill is settled. Then

²⁷ U.S. Securities and Exchange Commission: "SEC Issues Interpretive Guidance on Disclosure Related to Business or Legal Developments Regarding Climate Change", Press Release January 27, 2010.

²⁸ Public Securities Association, *Fundamentals of Municipal Bonds*, New York: Public Securities Association, 1990, p. 120.

²⁹ Mahan Haines, Martha, Assistant Director, Office of Municipal Securities, Division of Market Regulation, U.S. Securities and Exchange Commission, *Perspectives on Public Transparency*, Speech before the Second Internal Control and Fraud Conference of the Association of Governmental Accountants, Atlanta, Georgia, September 11, 2007.

administrative action must be taken to bring tax-exempt financing and federally subsidized taxable BAB financing policies into alignment with the nation's energy goals.

U.S. Department of Agriculture's Rural Utilities Service

The United States Department of Agriculture (USDA) provides assistance to rural electric utilities through the Rural Utilities Service (RUS). RUS provides direct loans and loan guarantees to rural utilities for the construction or retrofit of electrical transmission, distribution or generation facilities. The RUS has halted its direct loans for coal-fired power plants; however, it still provides financial assistance to its clients in the form of lien accommodations and lien subordinations, which it uses to assist borrowers in obtaining financing from other lenders. These actions, however, nevertheless place taxpayer dollars at risk and subsidize further use of fossil fuels. The RUS also routinely provides loans and loan guarantees to electric cooperatives for purposes other than developing coal-fired power plants.

For example, RUS has recently approved a lien accommodation for the East Kentucky Power Cooperative, Inc. The approval allows the cooperative, subject to state public service commission oversight, to move forward with a loan of more than \$900 million to construct a new coal-fired power plant. EKPC is a financially troubled cooperative with a long, well-documented history of faltering credit.³⁰

Lien accommodation means that RUS shares its lien on property covered by a mortgage. RUS shares liens on a borrower's assets with other lenders in order to assist borrowers to obtain financing for electric facilities, equipment and systems, and certain other types of community infrastructure.³¹ The lien is meant to protect an asset of the government of the United States of America and, therefore, funds provided by American taxpayers. Lien subordination means that RUS allows other lenders to take a first mortgage lien on property covered by the lien of the RUS mortgage while RUS takes a second lien. The arrangement places other lenders ahead of RUS in receiving reimbursement, if any, in the event of default or foreclosure of the loan.³² Relevant federal rules also give the RUS the option of releasing a lien outright instead of accommodating or subordinating a lien.³³

RUS is directed to consider a number of factors when deciding whether to accommodate, subordinate or release a lien on property pledged by a borrower under a RUS mortgage. These factors include the effects of such action on the achievement and purposes of the

³⁰ Public Service Commission of Kentucky, *Request for Proposal, Management Audit of EKPC*, March 9, 2009. For more extensive discussion of EKPC credit history also see: TR Rose Associates, *The Right Decision for Changing Times*, April 7, 2009, available at: [Kentucky.sierraclub/resources/Research/Right Decision/Full Report.pdf](http://kentucky.sierraclub/resources/Research/Right%20Decision/Full%20Report.pdf)

³¹ 7 CFR Section 1717.850 (b)(1).

³² 7 CFR § 1717.850 to 851 available at http://edocket.access.gpo.gov/cfr_2008/janqtr/pdf/7cfr1717.850.pdf

³³ 7 CFR § 1717.850 (l).

Rural Electrification Act, the repayment and security of RUS loans secured by the mortgage, and the following factors:

- (1) The value of the added assets compared with the amount of new debt to be secured;
- (2) The value of the assets already pledged under the mortgage, and any effects of the proposed transaction on the value of those assets;
- (3) The ratio of the total outstanding debt secured under the mortgage to the value of all assets pledged as security under the mortgage;
- (4) The borrower's ability to repay debt owed to the Government as indicated by a number of formulae and factors specified in the federal rules
- (5) Such other factors that RUS may determine are relevant in individual cases.³⁴

Lien accommodation and lien subordination, like direct loans, can place taxpayer dollars at risk because of the financial vulnerability of RUS borrowers. Indeed, in the mid 1990s deregulation and retail competition exacerbated the financial vulnerability of RUS borrowers who had high fixed costs primarily due to uneconomic construction projects and the accumulation of substantial debt.³⁵ Borrowers who had high costs, and were unable to raise rates because of regulatory and/or market constraints posed a particular risk of loss to the federal government. For example, in fiscal year 1996, about \$982 million of one borrower's loans were written off and forgiven because the company had invested in an uneconomical nuclear plant and couldn't sell its electricity at a price sufficient to service its RUS loans. Similarly, in the early part of fiscal year 1997, RUS wrote-off and forgave loans of about \$502 million because a borrower couldn't recover costs for a coal-fired generating plant when anticipated demand did not materialize.³⁶

Rural cooperatives are particularly vulnerable since they do not retain profit, and thus have low cash reserves; as a consequence they have difficulty responding if revenue is not sufficient to service debt. In such situations, the coops' options are to raise rates (difficult in periods of economic contraction), to cut costs (difficult if adding carbon emissions), or to default on loans. Restrictions on greenhouse gas emissions are certainly a factor that would affect costs and future capital needs and should be taken into account by RUS in considering lien accommodation, subordination and release.

Retrofits to existing coal plants, for example for compliance with the Clean Air Act, may not be a good use of RUS funding. In many instances, particularly with older coal-fired power plants, a retrofit to address a given regulatory requirement may appear cost-effective. However, a comprehensive analysis of investment in the plant considering all possible cost sources (regulation of greenhouse gasses, criteria air pollutants, hazardous

³⁴ 7 CFR § 1717.850(c).

³⁵ GAO; *Federal Electricity Activities: The Federal Government's Net Cost and Potential for Future Losses*; Report to Congressional Requesters; Volume I. September 1997. GAO/AIMD-97-110.

³⁶ GAO; *Federal Electricity Activities: The Federal Government's Net Cost and Potential for Future Losses*; Report to Congressional Requesters; Volume I. September 1997. GAO/AIMD-97-110. Page 9.

materials, and coal combustion waste) could reveal that the plant itself is no longer cost-effective under existing or likely conditions.

To address these concerns, RUS should (1) permanently halt granting loans and loan guarantees for the construction of new coal-fired power plants, (2) review its policies for loans and loan guarantees for coal-fired power plant retrofits, and (3) develop a prudence standard for lien accommodations, lien subordinations and lien releases. RUS also should require electric cooperatives to aggressively plan and take action to reduce their emissions of carbon dioxide and other greenhouse gases. Such efforts will strengthen the cooperatives' financials and reduce the risk of loan defaults that would have to be borne by the federal government and taxpayers. Finally, RUS should suspend lien accommodation or subordination for coal plants using the same financial risk analysis it has adopted to stop funding new plants. Federal assets are at risk in both instances from the same set of market factors.

U.S. Department of Energy Tax Credits, Loans, and Loan Guarantees

Title XVII of the 2005 Energy Policy Act (EPA 2005) established a loan guarantee program within the Department of Energy (DOE) to foster innovative technologies. In a federal loan guarantee program, the government guarantees that it will pay lenders if a borrower defaults on a loan, thus it helps borrowers obtain credit on more favorable terms than would be available in private lending markets. The new DOE loan guarantee program targets energy projects that meet three criteria: (1) avoid, reduce or sequester air pollutants or greenhouse gases; (2) employ new or significantly improved technologies; and (3) have a reasonable likelihood of repayment.³⁷ The three criteria present a significant challenge, and may in fact be unattainable, due to the current status of coal technology as well as circumstances in the electric industry.

DOE issued regulations to implement the program in October of 2007. DOE amended its regulations in December 2009.³⁸ Developing procedures and regulations and implementing the program has proved complex and difficult. Congress instructed DOE to use a "borrower pays" approach to funding the program, whereby DOE collects fees from borrowers to cover the subsidy cost of the program. DOE must calculate the subsidy cost based on its estimate of payments from the government to cover interest subsidies, defaults, delinquencies, or other payments, and its estimate of payments to the government, including fees, penalties, and recoveries on defaults.

Several reviews by the Government Accountability Office since the program's genesis in EPA 2005 concluded that, to the detriment of the program's success, DOE's initial focus in the loan guarantee program had been on expediting implementation of the program, rather than on establishing policies and procedures to manage the Program and

³⁷ Pub. L. No. 109-58, Title XVII (Aug. 8, 2005).

³⁸ US DOE; 10 CFR part 609, Loan Guarantees for Projects that Employ Innovative Technologies; Federal Register December 4, 2009, p. 63544.

its financial risks.³⁹ GAO determined that loan guarantee programs generally pose financial risk to the federal government, and that this program had additional inherent risks. The Office of Inspector General similarly found that the program contains certain inherent financial and programmatic vulnerabilities.⁴⁰

In one of its reviews the General Accounting Office found that DOE has not developed sufficient program detail and procedures.⁴¹ For example, DOE was unclear how it will estimate subsidy costs, and components of its project selection process, such as project eligibility criteria, are vague. Further, GAO found that inherent difficulties in estimating subsidy costs for a program of this nature could lead to financial losses for the government and could introduce self-selection biases in the projects that ultimately receive loan guarantees.

According to the Inspector General's Audit of the Loan Guarantee Program, DOE received approval, after 15 months of negotiations, from the Office of Management and Budget regarding the design and implementation of a Credit Subsidy Model (designed to estimate potential losses to the Government in the event of project failure and/or applicant default (page 3). The Credit Review Board approved the manual outlining policies and procedures on January 15, 2009.

One of the categories of project that is eligible for the guarantees is advanced fossil. In 2007 DOE invited 16 projects to submit applications for loan guarantees, three of them in the advanced fossil category. Two of the projects are Integrated Gasification Combined Cycle (IGCC) coal-fired power plants (one using lignite coal); and one would use IGCC technology to produce synthetic gas from coal for chemical feedstocks.⁴² In 2008, DOE issued solicitations for \$6 billion in loan guarantees for projects that incorporate carbon capture and sequestration (CCS) or other emissions-reducing carbon technologies into retrofitted and new coal-based power generation facilities, or industrial gasification activities, and \$2 billion for loan guarantees for advanced coal gasification projects.⁴³

³⁹ GAO The Department of Energy: Key Steps Needed to Help Ensure the Success of the New Loan Guarantee Program for Innovative Technologies by Better Managing Its Financial Risk, (GAO-07-339R, February 28, 2007); Observations on Actions to Implement the New Loan Guarantee Program for Innovative Technologies, (GAO 07-798T, April 24, 2007); New Loan Guarantee Program Should Complete Activities Necessary for Effective and Accountable Program Management, (GAO-08-750, July 7, 2008).

⁴⁰ DOE Office of Inspector General; Loan Guarantees for Innovative Energy Technologies, (DOE/IG-0777), September 19, 2007; DOE Office of Inspector General; Audit Report – The Department of Energy's Loan Guarantee Program for Innovative Energy Technologies, (DOE/IG - 0812), February 2009.

⁴¹ General Accounting Office; *Department of Energy: New Loan Guarantee Program Should Complete Activities Necessary for Effective and Accountable Project Management*; GAO-08-750; July 2008.

⁴² GAO-08-750, Appendix II, p. 32.

⁴³ US DOE; *DOE Announces Solicitation for \$8.0 Billion in Loan Guarantees*; Press Release September 22, 2008.

In 2009, DOE selected several projects for final loan guarantee negotiation. These projects include:⁴⁴

- Tenaska Taylorville Energy Center – loan coverage \$2.6 billion. This is a 730 MW coal-fired IGCC with CCS.
- Leucadia Corp Indiana Gasification SNG project – loan coverage \$1.6 billion. The Project would produce Substitute Natural Gas from coal for sale to customers in Indiana. The project could capture 85% of CO₂ emissions for sale for enhanced oil recovery.
- Leucadia Corp Mississippi Gasification SNG project – loan coverage \$1.689 billion. The project would produce Substitute Natural Gas from petroleum coke feedstock, for sale to electric utilities in the region. The project would capture over 85% of CO₂ emissions, which would be sold for use in enhanced oil recovery.

In no case should a loan guarantee enable the development of new coal technologies that do not integrate carbon capture and sequestration. Such an application would not satisfy the criteria of avoiding, reducing or sequestering greenhouse gas emissions, and would be contrary to on-going legislative efforts. For example, the Waxman-Markey American Clean Energy and Security Act,⁴⁵ which has been passed by the House of Representatives, includes a performance standard for coal that requires that new coal-fired electric power plants capture and store 50% of their carbon dioxide emissions, the required amount goes up to 60% after 2020.⁴⁶ Further, while it is appropriate for taxpayers, through the Federal Government, to bear some of the risk for innovation in the electric power industry, that risk should derive from the technology innovation, not from underlying factors in the industry (such as construction cost escalation, or failure to manage regulatory uncertainty).

IV. Conclusion

The current Administration has taken a proactive approach to leading the country towards a clean energy future. Numerous initiatives among federal agencies, including support for federally mandated carbon restrictions, a moratorium on direct loans for coal-fired power plants, Treasury guidance for development banks' lending for coal-fired power plants, SEC guidance for public companies regarding climate change risk, are all evidence of an increasing awareness of the interplay between energy and environmental policy and financial policy. There remain certain distinct areas where federal financial policy implementation is not consistent with, and is even in conflict with, clear federal efforts to adapt to a carbon constrained future. Inconsistencies in federal policy require federal administrative intervention; private companies will not necessarily remedy the inconsistency. The disconnect between federal policies not only sets the nation back in achieving energy and environmental policy goals, but also places taxpayer dollars at risk.

⁴⁴ Coal Utilization Research Council; *Issue Brief: DOE Loan Guarantee Program*; January 2010.

⁴⁵ United States Cong. House, 111th Congress, 1st Session, H.R. 2454.

⁴⁶ Several other legislative proposals have also included performance standards for coal.

As regulatory policy changes, as financial circumstances change, so must the administrative financial policies of the federal government.