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## Safe Harbor In Financial Storms: Renewable Energy Projects

By: Arthur J. Harrington

The economic turmoil has caused concerns throughout every sector of the economy. Predictions of continued gloom have made financing almost impossible for capital intensive projects. The one bright spot peaking out of the dark clouds forming in the current economic storm is renewable energy projects.

A multitude of factors favor renewable energy projects amidst the perfect storm of the current economic downturn. New increased Renewable Portfolio Standards ("RPS") for electrical utilities will create an almost insatiable appetite for renewable energy projects. Proposed federal and state programs will increase the value of these projects in the future. New proposals for cap-and-trade programs for greenhouse gas emissions will enhance the value of low carbon renewable energy projects. Production tax credits and other tax incentives will provide significant value for investors in renewable energy projects. Finally, power purchase contracts executed by triple A rated investor owned utilities will provide a secure framework for lenders looking to finance renewable energy projects.

Twenty-six (26) states have established RPS, which require some percentage of electricity sold within the respective states to come from renewable electrical generating sources. Generally speaking, renewable energy sources include: biomass and biogas; wind; geothermal; hydro; solar; and any other generation projects that have a relatively low carbon and renewable feed stock for fuel.

In most states that have RPS standards, these requirements can be met through the submission of tradable Renewable Energy Credits ("RECs"). A REC typically represents one MWh of generation from an eligible renewable source. Frequently, the REC standards also impose requirements on locations and emissions for renewable energy sources.

Some of the states which have adopted RECs also allow interstate trading of the RECs. Interstate trading of RECs allows an investor-owned electrical generating utility to purchase eligible RECs from qualifying facilities located outside of the purchaser's state. Interstate trading of RECs generally enhances the value of qualified renewable energy projects.

The RPS requirements vary between states. For example, some states require a specific percentage of the RPS be generated from solar projects (e.g., Colorado, Delaware, Maryland, New Jersey, and Nevada). The RPS for states range from 10% by 2025 (e.g. Wisconsin) to as high as 25% by 2013 (e.g. New York). The Pew Center on Global Climate Change, <http://www.pewclimate.org>. All of these existing state RPS enhance the value of qualified renewable energy projects.

Proposed legislation would also serve to enhance the value for renewable energy projects. In particular, cap-and-trade proposals for greenhouse gas emissions would

The following is based on a summary of legal principles. It is not to be construed as legal advice. Individuals should consult with legal counsel before taking any action based on these principles to ensure their applicability in a given situation.

boost the value of renewable energy projects. The lack of federal regulation of carbon dioxide promotes the current use of high carbon fuel sources such as coal. This allows coal-fired electrical generation to be cost-efficient. This cost/benefit equation for coal will shift if state and federal proposals to regulate carbon dioxide are enacted into law. Federal regulation of carbon dioxide will dramatically increase the value of low carbon, renewable energy projects, thus making them more cost efficient than current coal-fired generation. For example, EPA estimates that the cost of carbon dioxide emissions from a regulated source under a cap-and-trade program could soar to a range of \$61.00 to \$83.00 per ton of carbon dioxide emissions by 2030 and \$159.00 to \$220.00 by 2050. EPA analysis of Lieberman-Warner Climate Security Act of 2008.

There are many federal initiatives on the horizon for regulating carbon emissions and promoting renewable energy. Two of the most prominent proposals in 2008 were the Low Carbon Economy Act of 2007 and the American Climate Security Act of 2007. These proposals impose restrictions on carbon dioxide emissions from coal-fired power plants. They also require auctions for allowances imposed on each regulated industry. Under these auctions, the regulated industries would be forced to purchase a portion of the allowance in exchange for authorization to continue operations. Finally, these proposals allow offsets (i.e., reductions of carbon dioxide emissions certified in the unregulated sectors) that could be traded into the regulated sectors to meet emissions limits. This offset system for trading would increase the value of low carbon renewable energy projects.

President Obama also made various proposals related to renewable energy projects a keystone during his campaign. First, he proposes implementation of a cap-and-trade program to reduce CO<sub>2</sub> emissions 80% below 1990 levels by 2050. Under his proposal, all emission caps for regulated sectors would be auctioned off and portions of these receipts would be used to support development of renewable energy projects. During his election campaign, President Obama also proposed \$150 billion investment in clean energy. He also proposed a federally mandated 10% RPS by 2012, which would increase to 25% by 2025. Finally, his proposals included significant venture capital funding to develop clean energy technologies.

Significant portions of the 2008 and 2009 economic stimulus packages are directed to renewable energy projects. The 2009 economic stimulus bill, the "American Recovery and Reinvestment Act of 2009 ("ARRA")," directly enhances the value of renewable energy projects by providing over \$20 billion in appropriations related to

energy efficiency and renewable energy. Notably, the ARRA authorizes \$6 billion for the cost of guaranteeing loans for proven renewable technologies and transmission technologies; \$2.5 billion for renewable energy research, development, demonstration and deployment activities; and \$6.3 billion for state, local and Indian tribe government investments in energy projects targeted at reducing fossil fuel emissions and total energy use. Federal grant awards for renewable energy demonstration projects may also serve to attract interest from the private equity sector as a funding source for such projects.

The ARRA also increases the value of renewable energy projects significantly for investors through enhanced tax provisions. In total, the tax title in the ARRA includes in excess of \$300 billion in tax relief provisions, over \$25 billion of which is devoted to incentivizing investments in renewable energy technology. One such tax relief provision of ARRA is a long-term extension and modification of the renewable energy production tax credit. Section 1101 of the ARRA extends the "placed in service" date for wind facilities and most other qualified renewable energy facilities for three years through January 1, 2013 and for four years through January 1, 2014, respectively. The value of extending the production tax credit is estimated at \$13 billion over the next ten years.

The value of renewable energy projects is further increased by Section 1102 of the ARRA, which allows owners of wind facilities or qualified renewable energy facilities to elect to take the investment tax credit in lieu of the production tax credit. Prior to the ARRA, only facilities that produce electricity from solar power were eligible to take a 30% investment tax credit in the year the facility is placed in service. Facilities that produce electricity from wind, closed loop bio-mass, open loop bio-mass, geothermal, small irrigation, hydropower, landfill gas, waste to energy and marine renewable facilities were only eligible for a production tax credit, payable over a 10 year period. The value of the investment tax credit election is estimated to be greater than \$218 million over the next ten years.

The ARRA also adds to the value of renewable energy projects by increasing available tax credit bonds. Specifically, the ARRA increases the amount of energy conservation bonds ("ECBs") by \$2.4 billion, to \$3.2 billion, and increases the amount of clean, renewable energy bonds ("CREBs") by \$1.6 billion, to \$2.4 billion. ECBs can be used by state, local and Indian tribal governments to finance a wide range of renewable energy investments, including capital expenditures to reduce energy consumption or build renewable energy facilities, research and education. CREBs can be used by

state, local and Indian tribal governments, public power providers and cooperative electric companies to finance capital expenditures related to renewable energy facilities. CREBs are divided into thirds: one-third of the CREBs are available for qualified projects of state, local and Indian tribal government; one-third for qualified projects of public power providers; and one-third for qualified projects of electrical cooperatives. These additional tax credit bonds are estimated to provide additional benefits valued at over \$803 million over the next ten years.

State initiatives designed to reduce carbon emissions will also serve to enhance renewable energy projects. The Regional Greenhouse Gas Initiative ("RGGI") involves ten states that are signators to a Memorandum of Understanding ("MOU") signed on December 20, 2005. RGGI establishes a cap-and-trade program for CO<sub>2</sub> emissions from the power sectors in each state. This regional program establishes an annual cap that stabilizes emissions at current levels over the years 2009 to 2014 and declines by 2.5% annually between 2014 and 2018. The cap-and-trade program authorized by RGGI began on January 1, 2009.

In addition, various western states have formed the Western Climate Initiative. Signators to the Western Climate Initiative include: Arizona, California, New Mexico, Oregon, Washington, Utah, and Montana. The province of British Columbia has also joined the Western Climate Initiative. This initiative establishes greenhouse gas emission targets 50% below levels of 2005 emissions by 2020.

The Midwest Regional Greenhouse Gas Reduction Accord was signed by the Governors of various Midwestern states on November 15, 2007. The participating states in this accord include: Wisconsin, Minnesota, Illinois, Iowa, Michigan, and Kansas. The Premier of Manitoba has also signed the accord. This accord develops a regional greenhouse gas emission reduction target and develops a multi-sector cap-and-trade program for the region.

The most significant action to occur at the state level is California's enactment of Assembly Bill 32 on September 27, 2006. This legislation requires the state to reduce greenhouse gas emissions to 1990 levels by 2020. Recently, the California Energy Commission and California Public Utilities Commission have jointly recommended a cap-and-trade program for electricity generators as one method to meet these targets. All of these regional state initiatives serve to enhance the value of low carbon renewable energy projects.

While these state and federal programs provide enhanced value for renewable energy projects, there are sobering obstacles that must be considered in the cost/benefit analysis for such projects. First the timeline for proposed legislation is uncertain at best. For example, the Clean Air Act Amendments of 1990 were first proposed in 1981. It took nine years of negotiation, 59 days of hearings, 49 days for mark ups and five weeks of debate on the Senate floor before it was finally enacted. Unfortunately, all of the regulations called for in the 1990 Amendments are still not finalized - more than 18 years after the legislation was enacted.

There are also significant siting challenges for renewable energy projects. Public opposition in almost every type of project stems from those resistant to any change in the current development landscape. In addition, significant transmission upgrades are required for large scale renewable energy projects.

There are also numerous air permitting obstacles for renewable energy projects. First, long timelines are required for air permitting of major emission sources such as biomass facilities. These timelines are complicated by the new non-attainment area designations for the PM 2.5 standard. In these non-attainment areas, proposed major sources will be subject to more stringent and costly lowest available emission reduction ("LAER") standards and offset requirements for major source biomass projects. The fact that the PM 2.5 standards are relatively new further complicates renewable energy projects in these non-attainment areas since there is so little experience around the country for major sources located in non-attainment PM 2.5 areas.

Additional challenges for renewable energy projects include uncertainty for adequate, long term fuel supplies required by many biomass renewable energy projects. Given the expected, ever increasing RPS requirements, it may be difficult for developers of such projects to be able to cost effectively secure long-term supplies from biomass fuel suppliers.

Despite these challenges, the current federal and state legislative efforts directed at blunting the gathering economic storm creates remarkable economic opportunities for renewable energy projects. It is important to thoroughly analyze and assess the significant economic incentives offered in the federal stimulus legislation, many of which are focused on renewable energy projects. The push for reductions of greenhouse gas emissions in future cap-and-trade proposals will, if enacted, also add significant value to low carbon renewable energy projects

like biomass, hydro, waste-to-energy, solar, and wind. This is especially true when these renewable energy projects are associated with replacement of "carbon rich" existing electrical generation facilities. Under the cap-and-trade proposals, these carbon rich facilities will likely become too costly to control through pollution abatement projects required for such programs.

The existing regional trading initiatives provide enhanced values for RECs and carbon reduction credits frequently associated with renewable energy projects. The many enhanced tax incentives in the federal stimulus legislation will serve to increase investor interest in renewable energy projects. The financing sectors will likely view long-term power purchase contracts executed by utilities, faced with meeting enhanced RPS standards, as safe security for lending in these high capital projects.

Finally, it is important to note that certain assets will have significantly greater value in the enhanced future market for renewable energy projects. Some examples of these assets include underutilized dams, which can capture and generate hydropower. Unused space on rooftops of large "big box" developments will suddenly become a much more valuable asset for solar projects. The same is true for other locational assets that will have enhanced economic value for renewable energy projects. These locational assets include land with close proximity to large water bodies which could be the source of geothermal cooling, and large scale timber tracts that may be available to serve as a fuel source for biomass renewable energy projects.

In these states where wholesale and retail

markets are open for competition, this "open access" also provides additional sources of revenues from third parties that are looking for renewable sources of energy for business reasons.

All of these factors signal a potential for enormous opportunities for renewable energy projects during these uncertain economic times. They also serve to afford the potential for investments in renewable energy projects as a safe harbor in the midst of the perfect storm created by the current economic conditions.

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