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FINANCING ENERGY PROJECTS
Through Government Incentives

Many contractors have been paying increased attention to clean energy projects, in part because energy is currently one of the few growing segments in the construction industry.

In addition to bidding on such projects, some contractors have also directly entered the field by partnering with project developers and providing equity investments in projects.

As with any construction project, evaluating the viability of a clean energy project requires an understanding and analysis of project financing. Such an analysis is particularly important for clean energy projects because they carry a higher level of risk.

Both contractors and developers have found the debt-financing market to be less accessible since the economic downturn. The few lenders willing to participate in building projects impose stricter (and sometimes prohibitive) lending standards or require other major accommodations.

Similarly, equity funding is not as free-flowing as before. Equity partners and investors now demand solid confirmation of expected tax incentives and governmental financing. In addition, they usually expect to find a long-term power-purchase or lease agreement in place with a creditworthy utility or other purchaser.

So, piecing together a viable project financing plan with debt and equity now requires much more preparation and groundwork. Consequently, contractors and developers must look to other sources of project financing, including the more favorable incentives flowing from governmental programs.

Whether contractors are bidding on projects or intend to be direct participants, they should be aware of the degree to which such projects rely on governmental funding, subsidies, and tax incentives. They should also have a basic understanding of what those governmental programs are and how they fit into overall project financing.

" . . . almost all clean energy projects depend on governmental loan guaranties, grants, subsidies, and tax incentives for viability."

Role of Governmental Programs

Clean energy projects are typically funded through a combination of equity investments from project developers and investors, and short- and long-term debt provided by lenders.

Although government support of such projects continues to increase, the cost of obtaining equity and debt has also increased; and, traditional lenders remain uncomfortable with clean energy projects, which often include new technology and limited credit strength. As a result, almost all clean energy projects depend on governmental loan guaranties, grants, subsidies, and tax incentives for viability.

Direct Incentives

Financing plans for such projects integrate governmental incentives in a variety of ways. Plans can incorporate the present value of expected cash flow from future grant payments and the tax-reducing benefits of credits and deductions. Plans may also reduce the developer's cost of borrowing in exchange for credit support (such as a guaranty by a governmental body) as additional loan security.

Indirect Incentives

Even when incentives are not directly available to the project developer, there are ways to benefit from such programs indirectly. Some incentives are solely available to tax-exempt organizations or to states, agencies, or other local governmental entities (e.g., clean renewable energy bonds).

Structure Alternatives

In addition, under certain circumstances, a developer may be unwilling or unable to own the project directly. In such cases, it must find ways to structure the ownership, financing, and contractual relationships in a manner that accommodates the lender, provides incentives to investors, and appropriately protects it from excessive liability.

For instance, the developer may explore creative methods to partner with tax-exempt or governmental entities through formal partnerships, joint ventures, leasing agreements, or power-purchase agreements. If the plan is structured properly, the developer may lease the project to an investor and elect to treat the investor-lessee as the project owner. Upon making such an election, the investor is treated as the project owner in order to qualify for tax credits.

Effective negotiation and collaboration with third parties can yield the same or similar benefits as if the developer received the incentives directly. In any event, developers must carefully review the propriety of agreements and financing plans because federal programs typically come with rules designed to prevent misuse of funds or inappropriate private benefit from tax-exempt or governmental entities.

To put together a successful project, developers must often approach many potential equity partners and investors; obtain funding from multiple sources; and most importantly, structure the financing to incorporate as much governmental funding and as many incentives as possible. Throughout the negotiation and financing process, the developer may play a number of roles (such as negotiator, marketer, and collaborator) to make the deal happen.

Overview of Governmental Programs

Contractors and developers should investigate every avenue of financing, especially the many advantageous incentives flowing from governmental sources. Many of the incentives, subsidies, and tax credits discussed on the following pages are available only if the project is either placed in service by a certain date or if construction commences by a certain date.

Such governmental programs typically have a maximum amount available per project, require the project to use certain clean energy sources, and may even limit the use of public-private partnerships. As a result, each program should be reviewed by tax, accounting, and legal professionals to ensure that the expected benefits materialize.

Financing Support through ARRA & Other Programs

The most visible federal funding has been through the American Recovery and Reinvestment Act of 2009 (ARRA), which included more than $42 billion in energy-related funding to be distributed through several government agencies. ARRA also provided $21 billion in tax incentives, primarily for the promotion of renewable energy.

In addition to programs implemented under ARRA, other more established programs remain available to promote renewable energy projects.

These programs will become more important as the appropriations and sunset provisions for ARRA programs begin to lapse, unless Congress intervenes. Other programs have been authorized, but either the responsible agency has not actively implemented the program or Congress needs to appropriate additional funding. Some programs should become available as the agencies dole out the remaining ARRA funds or as Congress reconsiders additional stimulus ideas.

U.S. Department of Energy Programs & ARRA

The U.S. Department of Energy (DOE) maintains loan guaranty programs designed to provide credit support for the development of clean energy generation and transmission.

Two important programs were implemented through the Energy Policy Act of 2005 (EPAct) and ARRA. Section 1703 of the EPAct authorized the DOE to guarantee loans for clean energy projects. In particular, the program provides loan guaranties for projects that reduce greenhouse gases and pollutants and that use new or "significantly improved technologies."

ARRA funded a temporary loan guaranty program that was originally established under §1705 of the EPAct. To be eligible for loan guaranties under this program, projects must begin construction by September 30, 2011. This program was designed to encourage the development of:

1) Renewable energy systems (such as biomass, solar, wind, and hydropower) and facilities that manufacture renewable energy generation components;

2) Electric power transmission systems; and

3) Leading-edge biofuel projects.

ARRA originally included $6 billion in new funding for loan guaranties in support of clean energy technologies. The funding was intended to support up to $60 billion in loans. While the program has undergone some cuts, it remains a valuable resource for project financing. The DOE's loan authority exhibit indicates both the §1703 and §1705 Loan Programs.

ARRA also included $4.5 billion for electricity delivery and energy reliability activities to modernize the electric grid (commonly referred to as "smart grid" projects). Smart grid projects may include improvements and upgrades in utilities' generation, transmission, and distribution systems. But, they are generally intended to make transmission systems more reliable, more secure, "smarter," and capable of providing real-time information and interactivity for energy users.

In some cases, upgrades to modernize the transmission grid are as important to renewable energy projects as the generation plants themselves. Power generation must be accompanied with transmission facilities that can handle the quantity and variability of power from renewable sources.

As more utilities offer renewable energy to their customers, the national grid will need numerous upgrades. Much of the ARRA funding for these programs has already been awarded to various entities; however, contractors and developers may continue to directly or indirectly benefit from partnerships with the grant recipients.

In addition, the DOE maintains permanent programs designed to fund and encourage grid modernization projects that implement certain advanced technologies.

Small businesses are eligible to receive funding from the Small Business Innovation Research/Small Business Technology Transfer division of the DOE. These programs have funded approximately $36 million in FY 2010 for various renewable energy technologies (such as hydrogen, fuel cells, solar, geothermal, biofuels from cellulosic biomass, and wind energy sources). The division is expected to issue a new solicitation request for FY 2011 in the coming months.

U.S. Department of Agriculture Programs

The U.S. Department of Agriculture, through its Rural Development Office (USDA RD), provides funding for energy projects in rural areas. One program, the Business and Industry Guaranteed Loan Program, received $1.57 billion in authorization to support guaranteed loans. Funding is available for equipment, real estate, and permanent working capital.

This program is available for many types of rural-based businesses, but one of the specific allowable purposes is for the development and construction of renewable energy systems. "Rural areas" include any area except a city with more than 50,000 residents or an area adjacent to such a city.

While loan amounts usually do not exceed $10 million, the USDA RD administrator can increase loan amounts to $25 million. Guaranty percentages range from 60-80%, although ARRA provided some 90% guaranties for loans of $10 million or less for projects determined to be high-priority projects.

In addition, the Rural Energy for America Program (REAP), provides grants, loan guaranties, and combination grant/loan guaranties for the purchase and installation of renewable energy projects by rural small businesses.

As with the Business and Industry Guaranteed Loan Program, a rural area includes any area except a city with more than 50,000 residents or an area adjacent to such a city. Eligible renewable energy projects include wind, solar, biomass, geothermal, small hydroelectric, and hydrogen.

Grants of up to $500,000 are available, and can constitute no more than 25% of total eligible project costs. Loan amounts cannot exceed $25 million. Guaranty percentages range from 60-75%.

The USDA RD issues periodic notices of solicitation for applications for the program. Already, $70 million has been provided for the program for 2011 and 2012, with additional discretionary funding likely to be issued for each year.

Tax Incentives under ARRA

Energy-related tax incentives are an important component of ARRA. Such incentives are just as important to the successful financing of clean energy projects as loan guaranties and direct funding. In the past, developers have obtained equity from investors through tax-equity financing by selling the projected dollar value of anticipated tax credits at a discount.

While the market for such financing has slowed because of the economic downturn, the new grant-in-lieu program discussed on page 49 provides another way to turn tax credits into cash. It's important to keep in mind that the benefits from most credits and incentives are available only when the project is placed in service, which affects the ability of developers to obtain early-stage financing.

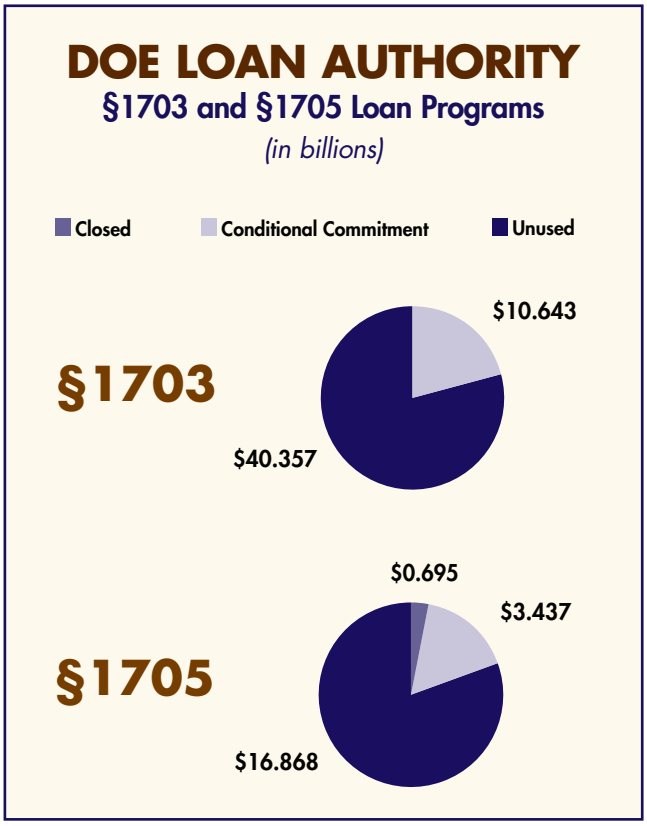
ARRA impacted two important federal tax credits – the Production Tax Credit (PTC) and Investment Tax Credit (ITC) – and created a new credit – the Qualifying Advanced Energy Project (QAEP) Credit.

The Production Tax Credit

The PTC is based on the quantity of renewable energy produced and sold during the first 10 years of the project, commencing with the date the facility is placed into service. For the credit to apply, the project must be a "qualified facility" that produces and sells electricity to third parties. "Qualified facilities" include those that use wind, biomass, solar, and municipal solid waste to generate power.

The credit is calculated by multiplying the amount of electricity sales during the taxable year (measured in kWh) by a specified inflation-adjusted amount, which was 2.1 cents in 2009.

ARRA extended the in-service dates for projects eligible for the PTC to January 1, 2013, for wind facilities, and to January 1, 2014, for most qualified facilities, including biomass, landfill gas, and hydropower projects, as detailed below:



Energy Facility	In-Service Deadline
Large Wind	January 1, 2013
Closed-Loop Biomass Facility	January 1, 2014
Open-Loop Biomass Facility	
Geothermal under IRC §45	
Landfill Gas Facility	
Trash Facility	
Qualified Hydropower Facility	
Marine & Hydrokinetic	

The Investment Tax Credit

The ITC is available for certain renewable energy systems that include solar, fuel cells, small wind turbines (up to 100kW capacity), and geothermal systems. Eligible systems generally must be placed in service on or before December 31, 2016. The entity claiming the credit must construct the system or begin original use of the system before that date.

The ITC is calculated by multiplying expenditures for an eligible system by the energy percentage, which is 30% for solar, fuel cells, and small wind turbines and 10% for geothermal and other systems. ITC energy percentages are shown on the following page:

Energy Property	Energy Percentage
Qualified Fuel Cell Solar Energy Equipment Qualified Small Wind Energy	30%
Geothermal Deposit Equipment Qualified Microturbine Combined Heat and Power Geothermal Heat Pump System All Others	10%

PTC & ITC Qualification Changes

ARRA significantly affected use of the PTC and the ITC. One change allows facilities that are eligible only for PTCs to qualify for ITCs instead. Taxpayers making such an election will receive ITCs calculated using a 30% energy percentage.

Owners of biomass, landfill gas, geothermal, hydropower, and marine and hydrokinetic renewable energy facilities placed in service from January 1, 2009, through December 31, 2013, and owners of wind facilities placed in service from January 1, 2009, through December 31, 2012, can elect ITCs instead of PTCs.

This change could have a substantial impact on project financing because the ITC provides a larger immediate tax credit, as opposed to a lower tax credit spread over several years. Investors seeking to take advantage of tax credits might pay or invest a higher amount because they will no longer need to wait several years to reap the expected tax benefit of their investment.

The developer will also benefit because investors will likely apply a lower discount rate to monetize the expected future tax benefit. In any event, the outcome of each potential tax credit should be reviewed.

The Grant-in-Lieu Program

Another significant change brought about by ARRA is the grant-in-lieu program. Under this program, developers receive a cash grant generally equal to 30% of the cost of project facilities instead of the ITC or PTC.

This program is particularly beneficial for renewable energy projects since developers of such projects often do not have sufficient tax liability to make full use of tax credits. The in-service deadlines for the grant-in-lieu program are as follows:

Energy Property	In-Service Deadline
Large Wind	January 1, 2013
Closed- and Open-Loop Biomass §45 Geothermal Landfill Gas Trash Qualified Hydropower Marine and Hydrokinetic	January 1, 2014
Solar §48 Geothermal Fuel Cells Microturbines Combined Heat and Power Small Wind Geothermal Heat Pumps	January 1, 2017

To qualify for the grant, applicants must start construction by December 31, 2010, and submit an application to the Department of the Treasury by October 1, 2011. Construction is deemed to begin when either physical work of a significant nature begins or (pursuant to a safe harbor test) more than 5% of the total cost of the property has been paid or incurred.

The Qualifying Advanced Energy Project Credit

ARRA also brought about a new tax credit for QAEPs. The credit equates to 30% of the basis of eligible property placed in service and certified by the IRS pursuant to the QAEP program. The projects must re-equip, expand, or establish a manufacturing facility for the production of renewable energy property, such as fuel cells, microturbines, and electric grids designed for renewable energy transmission and storage.

Under the program, the IRS and the DOE were authorized to certify up to $2.3 billion in credits. The program has received so much interest that the original $2.3 billion was applied for and allocated, and the President has requested Congress to

authorize and appropriate additional funds for the QAEP program.

Again, contractors and developers may indirectly benefit from the previously allocated credits through partnering with credit recipients.

Conclusion

Contractors and developers, and especially their financing departments, have certainly noticed the difficulty in obtaining funds for project development and construction costs. In the energy sector, however, several governmental programs and incentives are available to facilitate energy project development and to encourage financing for such projects.

To assist in piecing together an energy project's financing plan, CFMs must be mindful of the available sources of funding and lower-cost financing. They should consider these incentives and be creative in implementing them in the overall financing plan. ■

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WEB RESOURCES

1. **A short video on the smart grid:** *http://coned.com/publicissues/smartgrid.asp*
2. **An interactive and informative Website on the smart grid:** *www.oe.energy.gov/SmartGridIntroduction.htm*
3. **A DOE report on the smart grid:** *www.oe.energy.gov/DocumentsandMedia/final-smart-grid-report.pdf*
4. **More information on clean renewable energy bonds:** *www.ahclaw.com/content/resources/publications/CBJ_Article_CREBS.pdf*
5. **Additional information on energy tax credits and financing alternatives:** *www.ahclaw.com/subpage.php?section=resources*