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Incentives for BioEnergy Projects

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Definition

- Bioenergy technologies use renewable biomass resources to produce an array of energy related products including electricity, liquid, solid, and gaseous fuels, heat, chemicals, and other materials. Bioenergy accounts for three percent of the primary energy production in the United States.
- The term "biomass" means any plant derived organic matter available on a renewable basis, including dedicated energy crops and trees, agricultural food and feed crops, agricultural crop wastes and residues, wood wastes and residues, aquatic plants, animal wastes, municipal wastes, and other waste materials.

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Financing

- The Problem for BioEnergy Facilites:
  - Potentially large upfront costs
  - Timing of incentives may not be consistent with timing of payment s
  - View of incentives as “Ghost Equity”
  - Many of these facilities are start-up operations
  - Chicken in the egg issues: getting off take agreements before facility fully viable or built
  - Tax incentives may not be useful for entities without tax appetites
  - Credit markets still very challenging
  - Many commercial banks resistant to non-recourse debt for bioenergy facilites

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ARRA Tax Credits

- Treasury Grants instead of Production Tax Credits for projects where construction started in 2009 or 2010
- Temporarily replaces tax equity market that has disappeared
- Makes deal simpler
- Decreases financing costs
- Three year extension of the Production Tax Credit (PTC) for wind facilities placed in service by 12/31/12; and geothermal, biomass, hydropower, landfill gas, waste-to-energy and marine facilities placed in service by 12/31/13 (solar already extended in last congress)

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ARRA Tax Credits

- Investment Tax Credit (ITC) expanded from wind and solar to geothermal, biomass, hydropower, landfill gas, waste-to-energy and marine facilities
- Advance Energy Manufacturing ITC (30% up to $2.3 billion) for investment in advanced energy manufacturing
- Extends the bonus depreciation of 50% that Congress enacted last year through 2009 . These write offs can be applied to capital expenditures ranging from $250,000 to a newly increased threshold of $800,000

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Production Tax Credit

- IRC Section 45 establishes a production tax credit that is currently equal to:
  - 2.1¢ ("credit rate") multiplied by the kilowatt hours of electricity that are:
    - sold by the taxpayer to an unrelated person during the taxable year and
    - produced in the U.S. at a qualifying biomass energy project during the 10-year period beginning on the date the project is originally placed in service ("credit period")

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Biomass

- Closed loop Biomass means:
  - Any organic matter from a plant which is planted exclusively for purposes of being used at a qualified facility to produce electricity
- Open Loop Biomass means:
  - Any agricultural livestock waste nutrients, which means:
    - agricultural livestock manure and litter, including wood shavings, straw, rice hulls, and other bedding material for the disposition of manure
    - Agricultural livestock includes bovine, swine, poultry, and sheep

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Biomass

- Open-Loop Biomass also includes:
  - Any solid, nonhazardous, cellulosic waste material or any lignin material which is derived from
    - Mill and harvesting residues, precommercial thinnings, slash, and brush,
    - Solid waste materials, including waste pallets, crates, dunnage, manufacturing and construction wood wastes (other than pressure-treated, chemically-treated, or painted wood wastes), and landscape or right-of-way tree trimmings, but not including municipal solid waste, gas derived from the biodegradation of solid waste, or paper which is commonly recycled, or
    - Agricultural sources, including orchard tree crops, vineyard, grain, legumes, sugar, and other crop by products or residues.

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Dates

- In case of closed-loop biomass facility, a qualified facility is one that is:
  - Owned by the taxpayer, which is originally placed in service after December 31, 1992, and before January 1, 2014, or
  - Owned by the taxpayer which before January 1, 2014, is originally placed in service and modified to use closed-loop biomass to co-fire with coal, with other biomass, or with both, but only if the modification is approved under the Biomass
  - Power for Rural Development Programs or is part of a pilotproject of the Commodity Credit Corporation as described in 65 Fed. Reg. 63052.

Dates

- In case of open-loop biomass facility, a qualified facility is one that:
  - if using agricultural livestock waste nutrients,
    - is originally placed in service after October 4, 2004 and before January 14, 2014, and
    - the nameplate capacity rating of which is not less than 150 kilowatts, or otherwise
  - Is originally placed in service before January 1, 2014.

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Tax Appetite

- Developers of alternative energy projects often have insufficient income to utilize the tax attributes in the early years. In order for the provided tax incentives to serve their intended purpose (i.e., incentivizing/financing the construction and operation of alternative energy projects) it is essential that the developers be able to recognize the benefit of these incentives.
- In other energy production sectors, like wind or solar, several structures have evolved that allow the developer to “monetize” the tax incentives by shifting entitlement to the incentives to investors that can use them.

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REAP Loan Guarantees

- Loan guarantees are made to fund the development, construction, and retrofitting of commercial-scale biorefineries using eligible technology. The maximum loan guarantee is $250 million.
- Mandatory funding is available through FY 2012.
- Eligible Technologies include:
  - technology that is being adopted in a viable commercial-scale operation of a biorefinery that produces an advanced biofuel; and
  - Technology that has been demonstrated to have technical and economic potential for commercial application in a biorefinery that produces an advanced biofuel.
- http://www.rurdev.usda.gov/rbs/busp/baplg9003.htm

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ARRA Bond and Loan

- $1.6 billion of new clean energy renewable bonds (CREBS) to finance wind, closed-loop biomass, open-loop biomass, geothermal, small irrigation, hydropower, landfill gas, marine renewable, and trash combustion facilities
- One third of the authorized funding will be available for qualifying projects of state/local/tribal governments, one-third for public power providers and one-third for electric cooperatives
- $6 billion temporary loan guarantee program for renewable energy power generation and transmission projects that begin construction by 9/30/11
  - up to $500 million of the overall $6 billion can be used for the development of leading edge biofuels that have been demonstrated and have commercial promise to substantially reduce greenhouse gas emissions
  - expected to create over $60 billion in private financing

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PACE Bonds

- November 2009, Governor signed into law Sustainable Municipal Finance Law, which let municipalities issue debt to leverage $454mm in Federal Loan Guarantees
- Only programs that are supported by “Federal Grant Assistance or Federal Credit Support for that purpose” may establish programs.
- Deadline for applications for $454mm in Federal Loan Guarantees expired 12/15/09.
- Several bills pending before House and Senate that would expand Federal Grant Assistance and Credit Support, including Congressman Israel’s bill.

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