technologies. Proposed projects must meet the requisite standards to qualify as "New or Significantly Improved Technologies" as defined in Code of Federal Regulations, Title 10, Chapter II, Part 609. The solicitation provides for a total of $8.5 billion in funding and is to remain open until that amount is fully obligated.

Biomass to energy is an eligible category for funding.

Federal USDA RD Loan Program

The Rural Energy for America Program, formerly section 9006 under the 2002 Farm Bill, is composed of several types of grants and guaranteed loan programs. These are: guaranteed loans and grants for the development/ construction of renewable energy systems and for energy efficiency improvement projects; grants for conducting energy audits; grants for conducting renewable energy development assistance; and grants for conducting renewable energy feasibility studies.

Borrowers must be an agricultural producer or rural small business. Agricultural producers must gain 50% or more of their gross income from their agricultural operations.

Eligible project costs include:

1) Post-application purchase and installation of equipment,
2) Post-application construction or improvements,
3) Energy audits or assessments,
4) Permit or license fees,
5) Professional service fees,
6) Feasibility studies and technical reports,
7) Business plans,
8) Retrofitting,
9) Construction of a new energy efficient facility only when the facility is used for the same purpose, is approximately the same size, and based on the energy audit will provide more energy savings than improving an existing facility,
10) Working capital,
11) Land acquisition.

Federal Tax Credits

Production Tax Credit (PTC): Section 45 of the Internal Revenue Code provides a tax credit of up to ~2¢ per kWh for electricity generation from biomass feedstock.

A biomass project's tax owner can either elect to take (1) the PTC on a yearly basis for 10 years; or (2) as a one-time lump sum cash payment in the first tax year after commercial in-service. Under the lump sum option, the PTC would be an equivalent of an Investment Tax Credit (which would enhance the payback period of a project's capital investment).

Expansion of Allowance for Cellulosic Biofuels Property: Under current law, taxpayers are allowed to immediately write off 50% of the cost of facilities that produce cellulosic

ethanol if such facilities are placed in service before January 1, 2013. The bill makes the benefit available for the production of other cellulosic biofuels in addition to cellulosic ethanol

American Recovery and Reinvestment Act Bonds

The American Recovery and Reinvestment Act Authorizes $1.6 billion of Clean Renewable Energy Bonds (CREBs) to finance facilities that generate electricity from certain renewable resources. It also authorizes an additional $2.4 billion of qualified energy conservation bonds and clarifies that the proceeds of qualified energy conservation bonds could be used for loans, grants, and other repayment mechanisms that implement green community programs.

New Clean Renewable Energy Bonds ("CREBs"). The bill authorizes $800 million of new clean renewable energy bonds to finance facilities that generate electricity from wind, closed-loop biomass, open-loop biomass, geothermal, small irrigation, qualified hydropower, landfill gas, marine renewable and trash combustion facilities. This $800 million authorization is subdivided into thirds: 1/3 for qualifying projects of state/local/tribal governments; 1/3 for qualifying projects of public power providers; and 1/3 for qualifying projects of electric cooperatives. The bill also extends the termination date for existing CREBs by one year.

Guaranteed Federal Financing: In the Economic Stimulus Act, Congress authorized ~$4 billion in federally backed loan guarantees to finance renewable energy and energy efficiency projects. The program is to be administered by the U.S. Department of Treasury with expected interest rates of ~3% per year.

Findings

Having private partners as part of the financing package for the construction of anaerobic digester would allow for the use of two of the best financing options: the Oregon Business Energy Tax Credit and the Federal Production Tax Credit.

Appendix

Acronym Glossary

AD – Anaerobic Digester

BETC – Business Energy Tax Credit

BMP – Biochemical Methane Potential

Btu – British thermal unit

C:N – Carbon to nitrogen ratio

CH_4 – Methane

CHP – Combined Heat and Power

CO_2 – Carbon Dioxide

COD – Chemical Oxygen Demand

CSTR – Continuously Stirred Tank Reactor

DEQ – Department of Environmental Quality

DOE – Department of Energy

ECOregon – Essential Consulting of Oregon

g – gram

g/kg – grams per kilogram

g/L – grams per liter

gpm – gallons per minute

H_2S – Hydrogen Sulfide

HRT– Hydraulic Retention Time

kg – kilogram

kW – kilowatt

kWh – kilowatt hour

L – liter

Mcf – thousand cubic feet

MFW – Municipal Food Waste

mg/L – milligram per liter

MMBtu – million BTU

MW – megawatt

OF-MSW – Organic Fraction of Municipal Solid Waste

OLR – Organic Loading Rate

ppm – parts per million

scf – standard cubic feet

SRT – Solids Retention Time

SSO – Source Separated Organics

Tonne – Metric ton

tpd – tons per day

tpy – tons per year

TS – Total Solids

Ton (US) – 2,000 pounds

VS – Volatile Solids

w/v – weight by volume

Additional Analysis: Economic Opportunity, Business Models and Climate Impact

This appendix explores several issues not fully treated elsewhere in the report. The overall goal is to provide additional understanding for elected officials and county administrators as they consider options for higher and better uses of the county's waste stream.

In all cases below, there is financial opportunity for County if organic wastes can be diverted from the landfill. The focus here is not solely on direct financial benefit to county government; indeed, project viability and aspects of the public mission receive equal treatment, as do broader economic benefits to the community as a whole. Environmental benefits (which overlap with decreased risk in many situations) also result from better uses of waste streams. In all cases, the economic development opportunity can be better understood, and this discussion aims to find the county's potential role and appropriate levers for bringing multiple-benefit projects to fruition.

Roles for the County in Emerging Power Markets

Markets for electricity are experiencing a multitude of changes that will continue and in some cases accelerate over the next few years. These changes in power markets open up new potential roles for county government.

Some new roles consist of direct involvement. The many opportunities for distributed (i.e., smaller scale and less centralized) power generation make the county an important project leader or participant. The county as an owner of local real estate can play an important role as host or facilitator, especially where public lands are among the most desirable for a given project. As a major local customer, county government's operations can provide power purchase agreements (PPA) that offer stability at the early stages (even to the extent of allowing a project to secure financing). As these projects are often smaller projects than historically "utility scale" projects, the county's involvement can potentially 'tip the scales' and bring other important partners, local and others, on board.

Other important county roles involve policy. The absence of flow control or a single franchise (for waste hauling) provides an open field, a source of both opportunity and risk for potential private participants. A single franchise can provide stability for a single hauler under a comprehensive contract. Flow control can ensure the viability of one or more enterprises, while upholding other goals (such as particular aspects of environmental performance). Individual policies can achieve some of these specific aims; for example, policy can steer individual waste streams toward higher and better uses with mandates, fees, policies or restrictions.

It is crucially important to see the county's intervention in food waste streams in particular as not just an appropriate public sector role, but an important filling of a vacuum that private entities simply cannot fill. The instability and uncertainty (in the

absence of flow control and a single franchise) both prevents some investments and makes it more likely for "cherry-picking" of key waste streams to occur, thereby damaging the viability of overall good management of the waste streams.

Advantages for County of Working with Private Partners

The management of solid wastes as feedstocks for energy generation or other ends requires technology, capital, expertise, real estate and other elements. Often, the public sector has some or all of these elements in place, and can therefore either implement alone or act as a major partner in a waste-based project.

However, there are several areas in which private-sector partners offer additional or distinct benefit. We list and explain them here briefly, as many of them may apply to the project scenarios described in this report.

State and federal tax credits for renewable energy can often be fully utilized only by a private investor or partner. Even when public agencies may access this source of capital or cash flow, it is often only to an incomplete extent. Private partners can often, through their access to tax credits (such as Oregon's BETC), significantly improve a project's pro formas and in some cases make it viable when it wouldn't otherwise be.

Private partners often provide *flexibility of investments sources* that the public sector generally cannot match. By definition, a private investor is open to virtually every sort of debt and equity financing (in addition to the tax credits mentioned above). While public entities have access to special bonding opportunities and other such borrowing, these options are not as broad as general access to financial markets.

Private investors can also choose from *a wide range of enterprise types*. Depending on the technology, location and other details of a project, this flexibility may be important for tax, legal or operating reasons. (See other sections of this report for information on enterprise type.)

Mitigation of public risk is perhaps the most important benefit of private-public partnerships. While private partners in waste-related projects may seek higher returns (or at least the possibility of high returns) for their involvement, they are often willing to accept risk that the public therefore need not bear.

Carbon Benefits, Risk Reduction, and Implications of Regulation

There are several ways in which the careful use of food and other wastes can deliver lower life-cycle greenhouse gas emissions (i.e., carbon dioxide and other carbon dioxide equivalent gases, hereafter just *carbon*). Many of these paths provide economic benefit for related reasons, and they tend to overlap with other policy priorities and initiatives.

A recent EPA study[1] focused on the carbon implications of materials management and land use changes describes a number of important strategies related to food waste and other wastes. The aggregate potential benefit of strategies related to energy recovery, composting and recycling totals several hundred million metric tons of CO2-equivalent. While many of these actions are not focused exclusively or even principally on food, it is certain that food waste-related investments will be easier, less costly and more beneficial if pursued in coordination with these broader strategies to redesign and repurpose material flows.

For scale, it is important to compare the capture of methane emissions from landfills with other potential paths to more efficient and environmentally beneficial material flows. The total maximum potential "carbon benefit" for methane capture for power generation (assuming 100% methane capture) is a reduction of 150 MMT CO_2e (million metric tons CO_2 equivalent), while the total maximum potential from recycling and composting (assuming 100% recycling of MSW and construction and demolition (C&D) waste, and 100% composting of food waste) is 470 MMT CO_2e. While neither extreme is scenario is achievable in the foreseeable future, the juxtaposition makes clear the higher and better use: capturing emissions from landfills is of lower carbon benefit. Landfills pose their own risks and costs as well, which should be considered in any complete analysis of investments to shift waste out of landfills and into other end-of-life scenarios.[2]

These landfill-related risks will likely be an increasingly important consideration as state and federal climate policies begin to address public and private operators of waste infrastructure. Public entities in particular should act now to mitigate these risks. Regulations of carbon emissions from all sources could affect landfills in different ways, e.g., higher required rates of capture, specific investments to address methane emissions, increased monitoring requirements for legacy facilities, etc. Redirecting waste streams generally and food waste in particular from landfills will reduce the likelihood and/or scale of such regulation-driven costs in the future, while delivering greater overall environmental and economic benefit (as described above).

[1] "Opportunities to Reduce Greenhouse Gas Emissions through Materials and Land Management Practices," EPA (2009).
[2] Ibid., p. 22-23.

Food Waste Collection Models

Municipality name	Portland, OR	Olympia, WA
Agency name	City of Portland Bureau of Planning and Sustainability and Metro partnership	City of Olympia, Public Works
Web site	http://www.portlandonline.com/osd/index.cfm?c=41682	http://www.ci.olympia.wa.us/en/city-utilities/garbage-and-recycling/organics-and-yard-waste.aspx
What do they collect?	All food waste, including vegetables, fruit, meat, seafood, bread/baked goods, grains, dairy, eggs, coffee grounds and filters, plate scrapings can be composted. **Wood produce crates** and **floral waste** can also be included. Paper that has been in contact with food, like napkins, parchment bakery tray liners, pizza boxes waxed paper, uncoated paper plates and waxed cardboard, can be composted. (http://www.portlandonline.com/osd/index.cfm?c=41786&a=110948)	All food, yard waste, and food-soiled paper: Meat and dairy Paper and Food Waste: Includes things like meat, cheese, dairy, seafood, bones, vegetables, eggshells, fruits, grains, and food-soiled paper. Food will be accepted cooked or raw. (http://www.ci.olympia.wa.us/~/media/Files/PublicWorks/PDFs/WasteManagement/whatgoesincart-lowres%20jpg.ashx) **Not accepted**:No plastic of any kind, especially plastic bags. No liquids of any kind.
How is it collected?	Haulers will **use the same trucks they use to pick up trash and yard debris, but the haulers will make "food waste-only" runs with their trucks. Haulers are responsible for ensuring their trucks are capable of transporting the food waste without creating nuisances.** (http://www.portlandonline.com/osd/index.cfm?c=41786&a=110948)	Organics collection was one of the major strategies outlined in Olympia's Toward Zero Waste Plan adopted by Council in 2007. This new program will enhance the existing every-other-week curbside yard waste collection to include food waste and food-soiled paper. It will provide residential customers another opportunity to further reduce their garbage, keep organic waste out of the landfill and help the environment. The material collected will be composted by a local company, Silver Springs Organics. (http://www.ci.olympia.wa.us/city-utilities/garbage-and-recycling/organics-and-yard-waste/organics-and-yard-waste-the-basics.aspx)
Mandated/Voluntary?	The Portland Composts! program is a **voluntary program, but mandatory only for the largest commercial food waste generators.** **Mandatory commercial food waste collection has been adopted and will begin in 2012, for all other commercial food waste generators and collection of residential food waste will begin. (get exact number of large food waste generatorscovered under the requirement before 2012.)** (http://www.portlandonline.com/bps/index.cfm?c=49989&a=240682)	**Voluntary**

Municipality name	Portland, OR	Olympia, WA
Targeted Participants	**Large food waste generators**: grocery stores, institutional kitchens in hospitals and universities, hotels, food processors, restaurants and wholesale food distributors. (http://www.portlandonline.com/osd/index.cfm?c=41786&a=110944) Note: The program currently targets only generators whose waste goes through the City of Portland's transfer stations.	**Residential**
Purpose of program	75 percent of waste that goes to the landfill comes from businesses. Studies show that food waste, food contaminated paper and waxy corrugated cardboard make up nearly 30 percent of that total. Roughly 54,000 tons of food waste and food-contaminated paper enter the commercial waste stream each year. **Removing food from the waste stream significantly reduces the global warming impact from landfills, as decomposing food waste is a major source of the greenhouse gas methane.** (http://www.portlandonline.com/osd/index.cfm?c=41786&a=110941)	**In June 2006 the Olympia City Council adopted a zero waste resolution with a stated goal of eliminating the need for landfill space. The resolution spells out a vision where all products and packaging consumed or sold in Olympia either will be reused or recycled and where discards from every household or business are collected for reuse or remanufacture.** **In 2005, Olympia's residents and businesses generated 64,700 tons of waste, of which an estimated 32,900 tons (51 percent)** was composted or recycled. It was estimated that 28 percent of the garbage sent to the Thurston County Waste and Recovery Center and then on to the regional landfill was potentially recyclable. (http://www.theolympian.com/opinion/story/509224.html)
Benefits of program to municipality	Based on an EPA model, **sending 45,000 tons of organic waste to be composted instead of land filled reduces greenhouse gas emissions by an estimated 44,000 metric tons per year CO2E.** By removing the "wet" organic portion of the waste stream, the remaining waste is "cleaner." This provides more potential opportunity for greater overall recycling. (http://www.portlandonline.com/osd/index.cfm?c=41786&a=110948)	Decreases flow of waste to the landfill. Assists in reaching goal to capture at least 50 percent of the organic waste still sent to landfill by 2013, which means more subscribers and increased participation amongst current subscribers." (http://www.jgpress.com/archives/_free/001841.html)
Responsibility of food waste producer	**Contract with a hauler to pick up food waste.** (http://www.portlandonline.com/osd/index.cfm?c=41785&a=186287) Use of Compostable bags for food scrap collection: Only approved Compostable bags may be used in the Portland Composts! program. (http://www.portlandonline.com/osd/index.cfm?c=41785&a=187834) Free services: set-up assistance, employee training, free collection containers. (http://www.portlandonline.com/bps/index.cfm?c=41788&a=111040)	Just fill your cart and put it out by 6:00 a.m. on your pick-up day. There is a $25.00 re-delivery fee to cancel and then resume service within 12 months. (http://www.ci.olympia.wa.us/city-utilities/garbage-and-recycling/organics-and-yard-waste/organics-and-yard-waste-the-basics.aspx)

Municipality name	Portland, OR	Olympia, WA
Cost to generator to dispose of material	Financial Assistance **Capital Improvement Grants or Credits** -Pollution Control Facilities Tax Credit -Waste Assessment Grants **Reduced Operational Expenses** -Extra Strength Sewer Discharge Fees -Reduced Garbage Fees (http://www.portlandonline.com/osd/index.cfm?c=41785&a=184867)	A 35- or 95-gallon cart is $7.72 a month. Each additional cart is $7.72 per month.
Responsibility of collector	No collection is allowed between 10 a.m. – 10 p.m. in the downtown corridor. Responsibilities of collector depend on contract negotiated. (http://www.portlandonline.com/bps/index.cfm?c=41785&)	Collect organic material every other week as curbside pickup.
Amount of material collected annually	PDX and its partners collect between 22,000 and 32,000 pounds per month (between 264,000 - 384,000 lbs per year) of food waste to turn into compost for beneficial use. At full scale, an estimated 44,000 tons of Portland's commercial and residential food waste would be recycled. The residential food waste would be combined with 25,000 tons of yard waste. (http://blog.oregonlive.com/pdxgreen/2008/01/scott_learnthe_oregoniana_pile.html)	In July 2008, the City of Olympia added food waste to its existing residential yard trimmings green cart service, increasing curbside organics tonnages by about 400 tons/year to reach 4,000 tons/year. (http://www.jgpress.com/archives/_free/001841.html)
Where does material go?	The food waste is taken to Metro's transfer station in northwest Portland (6161 NW 61st. Ave.), where it is inspected for acceptability. Any load contaminated with glass, metal, plastic or toxics is sent to the landfill. Acceptable food waste will be re-loaded into trailers in 25 to 30-ton loads and hauled to Cedar Grove Composting, Inc.'s Maple Valley, Washington facility.	The material is composted by a local company, Silver Springs Organics.
How is material used?	The material is composted by Cedar Grove Composting, Inc.Food waste, paper and yard debris is unloaded and then ground up in an enclosed building equipped with a system that filters the building's air before it is released. Compost is kept under cover for about 6-8 weeks. It is then set out to mature further, screened to different sized particles, and then blended into a wide variety of compost and soil products.	The source separated organics are sent to Silver Springs Organics in Rainier, Washington, where they are composted using Engineered Compost Systems (ECS) aerated static piles. During the composting process, air is pulled through the piles and exhausted into a bio-filter (below) to accelerate the decomposition process and reduce odors.
Future uses?	n/a	n/a
How is product created from food waste used?	Cedar Grove sells **the bagged compost at local home improvement stores.** The region's compost facilities currently sell 90% of their product in the same year it was produced.	Washington State Department of Transportation is their biggest consumer of compost, purchasing it for landscaping along roadsides and other disturbed areas for erosion prevention, storm water cleaning, and fill. Compost is also donated to student garden.

Municipality name	**Seattle, WA (Residential)**	**Seattle, WA (Commercial)**
Agency name	Seattle Public Utilities	Seattle Public Utilities (Resource Venture)
Web site	http://www.seattle.gov/util/Services/Yard/Yard_Waste_Collection/	http://resourceventure.org/green-your-business/waste-prevention-recycling/food/food
What do they collect?	Fruit & vegetables, Bread, pasta, grains, Eggshells, nutshells, Coffee grounds & filters, Tea bags, **Meat, fish, and chicken, Dairy products (milk, butter, cheese), Shells and bones**, Paper towels & napkins (kitchen only), Paper plates (uncoated only), Food-soiled newspaper, Greasy pizza boxes, Shredded paper, Paper bags (uncoated) with food scraps, Compostable bags, Approved Compostable tableware, Plant material, Grass, Leaves, branches, twigs (up to 4 inches in diameter and 4 feet in length), Plant and tree trimmings, House plants (no pots), Small amounts of sod (less than 60 pounds), Holiday trees (No tinsel, ornaments, flocking; no longer than 6 feet long and 4 inches in diameter), Bundles up to 4 feet long and 2 feet in diameter, tied with natural twine. (http://www.seattle.gov/util/Services/Yard/Yard_Waste Collection/WhatsAccepted/index.htm)	Meat, Poultry, Fish, Shellfish & Bones, Egg & Dairy Products, Table Scraps & Plate Scraping, Fruit & Vegetables, Bread, Dough, Pasta, Grains, Coffee Grounds, Filters & Tea Bags, Kitchen Paper Towels, Cedar Grove Compostable Containers, Pizza Delivery Boxes, Paper Napkins, Waxed Cardboard & Paper, Cedar Grove Compostable, Cups, Plates, & Trays (No lids, straws or creamers), Plants & Flowers (No flower pots), Wood Pallets & Crates (No wire), Landscape Vegetation (less than 4'long & 4" diam.) (http://www.gogreenscene.com/uploads/file/Food%20Waste%20Handout-CG%20Packaging.pdf)
How is it collected?	**Food waste is collected weekly with yard waste in the same bin.** (http://www.seattlechannel.org/videos/video.asp?ID=4279)(http://www.cleanscapes.com/)	Businesses must sign up for collections. To get you started **program** offers: Free staff training, signs, and troubleshooting Free technical assistance and a cost savings estimate
Mandated/Voluntary?	**Mandatory:** Food and yard waste service is **required for all single-family households.** (http://www.seattle.gov/util/About_SPU/Recycling_System/History_&_Overview/Ban_on_Recyclables_in_Garbage/index.asp)	**Voluntary** (http://resourceventure.org/green-your-business/waste-prevention-recycling/food/LookWhosComposting.pdf/view)
Targeted Participants	**Residential** Non-Residential: The County is currently working with a pilot program with the school districts, restaurants, and institutional entities in development of such non-residential food waste collection programs. In conjunction with this pilot, food waste is considered to be a part of the MSW waste stream. (http://www.co.clark.wa.us/recycle/documents/11.2008%20Chapter%206.pdf)	**Commercial**

Municipality name	Seattle, WA (Residential)	Seattle, WA (Commercial)
Purpose of program	The State legislation established three goals: □ To achieve a 50% recycling rate where half of the waste stream will be recycled; □ To make recycling as affordable and convenient to the ratepayer as mixed waste disposal; □ To consider source separation as a fundamental strategy.	Reduce waste stream going to landfills: Seattle businesses throw away about 64,000 tons of food each year and spend roughly $7.8 million each year to dispose of this material as garbage. Include food-soiled paper and that totals about 37% of all the waste generated by Seattle businesses. (http://resourceventure.org/green-your-business/waste prevention-recycling/food/food)
Benefits of program to municipality	Decreasing flow of waste to landfills and meet zero waste goals.	Decreasing flow of waste to landfills.
Responsibility of food waste producer	Must recycle food waste unless compost system has been created on property.	Put waste in cart and put out cart on curb on collection day
Cost to generator to dispose of material	Collection is weekly and subscribers can choose from three cart sizes: • 13-gallon (mini-can) at $3.60/month • 32-gallon at $5.40/month • 96-gallon at $6.90/month Future Rates Monthly Residential Food and Yard Waste Can Rates Effective January 1, 2010: • 13-gallon (mini-can) at $4.10/month • 32-gallon at $6.10/month • 96-gallon at $7.85/month (http://www.seattle.gov/util/Services/Yard/Yard_Waste_Collection/Rates/index.asp)	Businesses that compost can cut their garbage bill by 30 percent. Compost collection rates are 20 percent less than garbage rates and most City and State taxes do not apply. (http://resourceventure.org/green-your-business/waste prevention-recycling/food/LookWhosComposting.pdf/view)
Responsibility of collector	Collector collects food and yard waste weekly.	Three certified food waste haulers in Seattle: Cedar Grove Composting, (206) 947-9806 CleanScapes, (206) 250-7500 Allied Waste, (206) 332-7777 Garbage collector delivers an outdoor compost collection container and empties the container at least once per week. (http://resourceventure.org/green-your-business/waste prevention-recycling/food/FoodTipRemind.pdf)

Municipality name	Seattle, WA (Residential)	Seattle, WA (Commercial)
Amount of material collected annually	In 2008 Cedar Grove converted more than 100,000 tons of food and yard waste from Seattle households and businesses into garden products. (Seattle Public Utilities estimates this year's changes will result in about 15,000 more tons -- less than 2 percent of Seattle's waste -- being kept out of the landfill.) (http://www.seattlepi.com/local/404368_recycle30.html)	In 2008 Cedar Grove converted more than 100,000 tons of food and yard waste from Seattle households and businesses into garden products. (Seattle Public Utilities estimates this year's changes will result in about 15,000 more tons -- less than 2 percent of Seattle's waste -- being kept out of the landfill.) (http://www.seattlepi.com/local/404368_recycle30.html)
Where does material go?	Cedar Grove Composting, Inc - Maple Valley, WA facility	Cedar Grove Composting, Inc - Maple Valley, WA facility (http://www.gogreenscene.com/cg_systems.asp)
How is material used?	The material is composted by Cedar Grove Composting, Inc.Food waste, paper and yard debris is unloaded and then ground up in an enclosed building equipped with a system that filters the building's air before it is released. Compost is kept under cover for about 6-8 weeks. It is then set out to mature further, screened to different sized particles, and then blended into a wide variety of compost and soil products.	The material is composted by Cedar Grove Composting, Inc.Food waste, paper and yard debris is unloaded and then ground up in an enclosed building equipped with a system that filters the building's air before it is released. Compost is kept under cover for about 6-8 weeks. It is then set out to mature further, screened to different sized particles, and then blended into a wide variety of compost and soil products.
Future uses?	n/a	n/a
How is product created from food waste used?	Compost is used in local parks and community gardens and is also distributed to local stores where it can be purchased. (http://cedar-grove.com/about/technology.asp)	Compost is used in local parks and community gardens and is also distributed to local stores where it can be purchased. (http://cedar-grove.com/about/technology.asp)

Municipality name	San Francisco, CA	Alameda County, CA
Agency name	SF Recycling, Norcal Waste Systems, Inc.	Alameda County's Waste Management Authority
Web site	(http://www.sfrecycling.com/) (http://www.sfrecycling.com/residential/composting.php?t=r) (http://www.sfenvironment.org/our_programs/topics.html?ssi=3&ti=6)	http://www.stopwaste.org/home/index.asp?page=528
What do they collect?	Fruit, vegetables, meat, poultry, seafood, shellfish, bones, rice, beans, pasta, bread, cheese, and eggshells, waxed cardboard, napkins, paper towels, paper plates, paper milk cartons, tea bags, coffee grounds/filters, wooden crates, and sawdust, floral trimmings, tree trimmings, leaves, grass, brush, and weeds	All Food Products: Fruit, vegetable, breads, cereal, dairy, Meat, fish (including bones), Leftovers & table scraps, Coffee Grounds, filters & tea bags Food-Soiled Paper: paper towels, plates & napkins, pizza boxes
How is it collected?	San Francisco's 3-Cart Recycling Program makes it far easier and more convenient for residents and businesses to recycle. Making recycling easier results in a dramatic increase in material recovery and allows San Francisco to surpass California's 50 percent recycling law, AB939. (http://www.sfrecycling.com/residential/index.php?t=r)	The following communities offer residential food scrap recycling (curbside pickup): Alameda, Albany, Berkeley, Castro Valley Sanitary District, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, Union City, San Francisco (http://www.stopwaste.org/home/index.asp?page=528)
Mandated/Voluntary?	Composting and recycling is required at almost all businesses and residences across the city, with most people facing the threat of $100 fines as an incentive to comply. Those fines could potentially go up to $1,000. (http://www.sfenvironment.org/our_sfenvironment/news.html?topic=details&ni=499)	Voluntary for food scraps, mandatory for yard waste: Now in effect, Alameda County law requires that all plant debris be separated and recycled. (http://www.stopwaste.org/home/index.asp?page=943)
Targeted Participants	Residential and Commercial	Member Agencies of the Alameda County Waste Management Authority: Alameda, Albany, Berkeley, Castro Valley, Dublin, Emeryville, Fremont, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro and Union City. (http://www.stopwaste.org/home/index.asp?page=495)
Purpose of program	The San Francisco Board of Supervisors has mandated a goal of 75% waste diversion for all of San Francisco by the year 2010.(http://www.sfrecycling.com/residential/index.php?t=r)	The Waste Management Authority and the Source Reduction and Recycling Board form an integrated Agency committed to achieving a 75% and beyond diversion goal, including reducing food waste going to landfills. and promoting sustainable consumption and disposal patterns. (http://www.stopwaste.org/home/index.asp?page=194)

Municipality name	San Francisco, CA	Alameda County, CA
Benefits of program to municipality	San Francisco has set itself the goal of sending no solid waste to landfills by 2020, with seventy-five percent diverted by 2010. The new law makes it easier for people not able to compost where they live to recycle those materials by requiring building owners to sign up for the City's existing composting and recycling programs. The environmental and financial benefits of mandatory composting are significant, and San Francisco's program is expected to be watched closely by other municipalities interested in diverting waste from landfills, reducing methane production and increasing carbon sequestration – not to mention improving soils and boosting local food production. (http://www.sfenvironment.org/our_sfenvironment/news.html?topic=details&ni=501)	Residential single-family waste characterization studies in Alameda County, located across the bay from San Francisco, found that food scraps accounted for 24 percent of the compostable organics stream. (http://www.environmental-expert.com/resultEachArticle.aspx?cid=6042&codi=24898&level=0) Food scraps and food-soiled paper are the largest unrecycled portion of the residential waste stream in Alameda County, making up about 38 percent of what households throw away. food scrap recycling has shown great promise and is crucial to helping Alameda County meet its goal of reducing the amount of waste going to landfill by 75 percent. (http://www.stopwaste.org/docs/foodscrap_pitch_2_01.pdf)
Responsibility of food waste producer	Residents and businesses must recycle food waste. Curbside pickup is through Recology.	Depends on the city
Cost to generator to dispose of material	Residents who do a good job recycling generate minimal trash, and may be able to save money by reducing their garbage service level. (http://www.sfrecycling.com/residential/recycleqa.php?t=r#3)	Prices vary by city and by size of cart. See the link for specific costs. (http://www.stopwaste.org/docs/residential_recycling_services_in_alameda_county.pdf)
Responsibility of collector	Neighborhood route trucks collect Compostable materials from green carts at 75,000 city homes and hundreds of restaurants and markets. (http://www.thegarbagepit.com/media_kit.php?kit=annex)	Weekly curbside pickup for participating cities. (http://www.stopwaste.org/docs/residential_recycling_services_in_alameda_county.pdf)
Amount of material collected annually	400 tons of food scraps and other Compostable material each day is sent to Recology's Jepson-Prairie composting facility,. (400 tons per day * 365 days = 146,000 tons a year) (http://www.sfenvironment.org/our_programs/topics.html?ssi=3&ti=6)	Average household participation in the voluntary food waste collection is 25 percent, which equates to about 10,000 tons/year (http://www.environmental-expert.com/resultEachArticle.aspx?cid=6042&codi=24898&level=0) Estimate: aerobically digesting 100 tons of food waste per day, 5 days a week, provides sufficient power for an estimated 800 to 1,400 homes for one year. (http://www.epa.gov/region/waste/organics/ad/EBMUDFactSheet.pdf)
Where does material go?	Jepson Prairie Organics, a wholly owned subsidiary of Norcal Waste Systems, Inc., operates a compost facility at 6426 Hay Road, two miles east of Vacaville, California. (http://www.jepsonprairieorganics.com/)	Food waste is delivered to EBMUD and screened, ground and cleaned of contaminants. Processing involves creating a slurry from the presorted food waste and further reducing contaminants and food waste particle size prior to digester feeding. A typical delivery is approximately 20 tons total weight. (http://www.epa.gov/region/waste/organics/ad/EBMUDFactSheet.pdf)

Municipality name	San Francisco, CA	Alameda County, CA
	Material is turned into compost at Recology's Jepson-Prairie composting facility. (http://www.sfenvironment.org/our_programs/topics.html?ssi=3&ti=6)	
How is material used?	Jepson Prairie Organics (JPO) processes the organic material it receives in ninety days. feedstocks are fed into an industrial sized grinder and mixed to attain a recipe of physical and chemical characteristics that are ideal for microbial decomposition. The blended material is mechanically pushed into Ag-Bag Composting Technology, with an in-vessel, forced aeration composting process. The bagging system fills a 200-foot plastic pod with feedstock while laying out two 4" perforated pipes inside the pod in order to maintain oxygen levels sufficient for degradation. The material remains in the Ag-Bag pod for 60 days during which time the composting material is monitored for temperature and oxygen levels. These measurements ensure that proper temperatures have been reached and maintained in order to eradicate undesirable microbial life. After the composted material has undergone the Ag-Bag process, the compost is pla The windrows help age or "cure" the compost. Duri	Material is turned into compost and electricity. East Bay Municipal Utility District (EBMUD) operates two bench-scale digesters. The digesters were fed food waste pulp produced by the EBMUD food waste process. For the compost program, machines remove contaminants (like plastic bags) before grinding the plant materials into small pieces. This mulch-like material is put into big piles or windrows where temperature and moisture are closely monitored to ensure this material decomposes properly. These windrows are over 100-foot-long and 15 feet wide. In about three to four months, the material breaks down into compost. http://www.rethinkwaste.org/residents/recycling-101/yard-trimmings)
Future uses?	Investigating an Anaerobic Digestion Process	Investigating the Anaerobic Digestion Process to Recycle Post-Consumer Food Waste. Pilot demonstration project shows that 100 tons of food waste anaerobically digested per day produces enough energy to power up to 1,400 homes. (http://www.epa.gov/region/waste/organics/ad/EBMUDFactSheet.pdf)
How is product created from food waste used?	Compost is used by local farms and vineyards and mixed with soil. Demand is high from farms and vineyards in the San Francisco foodshed for the compost already being generated from some 400 tons of compostables collected from about 1,800 San Francisco restaurants. Sold under the Jepson Prairie Organics label at twelve dollars a cubic yard, it sells out during peak spreading season. (http://www.sfenvironment.org/our_sfenvironment/news.html?topic=details&ni=501)	Farmers use compost to help grow new crops. Residents use it too for community gardens and their backyards. (http://www.stopwaste.org/docs/endless_cycle.pdf)

Municipality name	San Jose, CA	Toronto, Canada
Agency name	City of San Jose	City of Toronto
Web site	http://www.sjrecycles.org/	http://www.toronto.ca/greenbin/index.htm
What do they collect?	The City of San Jose has not implemented separate collection of food waste from MSW except at City events. Yard trimmings are collected for all residents of the City. Yard debris is weekly residential collection. There is commercial and appartment collection of food waste.	Fruits, vegetable scraps, Meat, shellfish, fish products, Pasta, bread, cereal, Dairy products, egg shells, Coffee grounds, filters, tea bags, Soiled paper towels, tissues, Soiled paper food packaging: fast food paper packaging, ice cream boxes, muffin paper, flour and sugar bags, Paper plates, Candies, cookies, cake, Baking ingredients, herbs, spices, Household plants, including soil, Diapers, sanitary products, Animal waste, bedding (e.g. from bird/hamster cages), kitty litter, Pet food (http://www.toronto.ca/greenbin/organics_processing/processing_css_intro.htm)
How is it collected?	Green Waste Recovery (GWR), provides Yard Trimmings collection service under exclusive agreements to provide loose in the street collection or cart service to all residents of the City. There is currently a backyard composting program. (http://www.sjrecycles.org/PDFs/AppendixA-NeedsAssessment_11-14-08.pdf)	City collection trucks have two separate compartments. One for organic materials which is collected weekly. The other for recyclable materials or garbage (residual waste) which are collected on alternating weeks. (http://www.toronto.ca/greenbin/organics_processing/processing_css_step1.htm) The Green Bin Program collects organic waste (fruit and vegetables scraps, paper towels, coffee grinds, etc.) and turns it into compost. (http://www.toronto.ca/greenbin/index.htm)
Mandated/Voluntary?	Voluntary	Voluntary program. Serves all Toronto single-family households and is beginning to service apartment and condo buildings. (http://www.toronto.ca/greenbin/index.htm)
Targeted Participants	The City's Organics Team is working to capture organics from all areas of generation including residential, commercial, and schools.	Residential: 90% of single family homes participate. (http://www.toronto.ca/greenbin/organics_processing/processing_css_step1.htm) The Green Bin Program currently services 510,000 single-family households. After a successful pilot program in 30 multi-unit residential buildings, the Green Bin Program is now being rolled out to 5,000 apartments, condos and co-op buildings. (http://www.toronto.ca/greenbin/index.htm)
Purpose of program	The City of San Jose ists this goal in its Green Vision plan: Divert 100 percent of the waste from our landfill and convert waste to energy. (http://www.piersystem.com/posted/1823/Green_vision_One_Year_Later.245308.pdf)	The City's plan to expand its organic material diversion program to meet its diversion goal of 70% waste diversion from landfill by 2010. (http://www.toronto.ca/greenbin/organics_processing/index.htm)

Municipality name	San Jose, CA	Toronto, Canada
Benefits of program to municipality	Residential Food Waste (10.8 percent) is the single largest component of the City's waste stream and along with Residential Compostable Paper (1.4 percent) comprise 12.2 percent of total disposal; Commercial Food Waste (5.1 percent) is the third largest component of the City's waste stream and along with Commercial Compostable Paper (3.3 percent) comprises 8.4 percent of total disposal. (http://www.sjrecycles.org/PDFs/AppendixA-NeedsAssessment_11-14-08.pdf)	Meet goals of Waste Diversion Task Force. Established in January 2001, the Waste Diversion Task Force 2010, comprised of all Toronto City Councillors, is charged with finding a 'made in Toronto' solution for waste diversion from landfill. The goal of Task Force 2010 is 30 per cent diversion by 2003, 60 per cent by 2006 and 100 per cent by 2010. (http://www.toronto.ca/taskforce2010/index.htm)
Responsibility of food waste producer	San José residents can set out an unlimited amount of yard trimmings each week as part of the Recycle Plus curbside garbage and recycling program. Clean green yard waste is set out at curbside in carts or loose piles. Most of the City (70%) still prefers to set out their material in loose piles of no more than 5x5 ft. each. Approximately 30% of the City's residents use carts for yard trimmings collection. (http://www.sjrecycles.org/organics/yard-trimmings-program.asp)	Participants must purchase the outdoor organic collection container. There is no fee for organic collection or recycling collection.
Cost to generator to dispose of material	Piling yard debris for collection is free. Residents who either live in an area that can't be collected in the street (12%), or have subscribed to a cart for a subscription fee of $4/per month (18%). (http://www.sjrecycles.org/organics/yard-trimmings-program.asp)	There is no fee for organic collection or recycling collection. The only cost is purchasing the organic collection container.
Responsibility of collector	Current curbside collection in San José results in over 130,000 tons of material to be processed into compost or other City approved products. Marketing of the material is the sole responsibility of the contractor, with most of the material being sold to the landscaping and agriculture industries. San José maintains a policy of highest and best use for all materials collected. Contract provisions stipulate that at least 50% of the material collected must be made into finished compost. (http://www.sjrecycles.org/organics/yard-trimmings-program.asp)	City collection trucks have two separate compartments. One for organic materials which is collected weekly. The other for recyclable materials or garbage (residual waste) which are collected on alternating weeks. (http://www.toronto.ca/greenbin/organics_processing/processing_css_step1.htm)
Amount of material collected annually	The biogas facility, Zanker Road Biogas, to be built on a 40-acre site near the San Jose/Santa Clara Water Pollution Control Plan, will convert up to 150,000 tons of organic waste per year to process and will produce energy that would otherwise have been destined for a landfill. (http://www.examiner.com/x-4846-SF-Green-Business-Examiner~y2009m6d30-San-Jose-furthers-its-Green-Visionprogram-goalsby-creating-waste-energy) Current curbside collection in San José results in over 130,000 tons of material to be processed into compost or other City approved products. (http://www.sjrecycles.org/organics/yard-trimmings-program.asp)	The City's processing capacity within city borders is up to 110,000 tonnes a year. Each year 100,000 tonnes of organic material are collected and processed into compost. (http://www.toronto.ca/greenbin/organics_processing/pdf/final-sso-public-consultation-report.pdf)

Municipality name	San Jose, CA	Toronto, Canada
Where does material go?	Currently all of the City's residential yard trimmings are being collected by Green Waste Recovery and processed by Zanker Road Resource Recovery at their Z-Best composting facility. Commercial yard trimmings and food waste are being collected by franchised haulers and processed at either the Z-Best facility or Newby Island Composting facility.The biogas facility, **Zanker Road Biogas, to be built on a 40-acre site near the San Jose/Santa Clara Water Pollution** Control Plan. (http://www.examiner.com/x-4846-SF-Green-Business-Examiner~y2009m6d30-San-Jose-furthers-its-Green-Visionprogram-goalsby-creating-waste-energy)	Disco Transfer Station located in the former Etobicoke community area and the existing Dufferin Organic Processing Facility, located in the former North York community area, will be reconstructed to increase annual processing capacity to 55,000 tonnes. (http://www.toronto.ca/greenbin/organics_processing/index.htm)
How is material used?	Currently the material is composted.	Turned into compost and biogas through anaerobic digester.
Future uses?	The City has chosen to send organics to an anaerobic digester (http://www.sjrecycles.org/PDFs/AppendixE-ConversionTechnology.pdf) San Jose's Zanker Biogas, will employ approximately 30-40 workers during its development phase, and is expected to create 50-60 direct and supporting jobs when fully operational.	The City is expanding its anaerobic digestor
How is product created from food waste used?	Energy produced from the biogas will be used in the City of San Jose.	Compost is given away to residents (http://www.toronto.ca/greenbin/organics_processing/processing_css_step4.htm) Biogas is transferred to a planned on-site cogeneration plant and converted into electricity and heat. (http://www.toronto.ca/greenbin/organics_processing/processing_css_step3.htm)

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Survey Instrument

Telephone Introduction

Hello, this is _____, calling from University of Oregon. We are working closely with Lane County Development to explore the possibility of converting food waste and other agricultural feedstocks to renewable energy. We helped the County complete an initial feasibility study that indicated that anaerobic digestion would be a viable technology to convert food waste and other agricultural waste products into electricity. Now we are looking to learn more about the specifics of food waste in the Eugene/Springfield area.

If possible, I would like to set an appointment to talk with you in person to learn about what kind and amount of food waste from your business/facility. The meeting would be at your place of business and would take about thirty minutes. All results will be kept confidential and you will not be asked to provide any proprietary information.

When can we set a time to speak face-to-face?
Thank you very much. We look forward to speaking with you.

Food Waste Generators Survey

1. General Coordinates
   a. Contact Name _____
   b. Company Name
      _____
   c. Position _____
   d. Phone _____
   e. Email _____
   f. Site location _____

2. What is the composition of the food waste that you have at your facility?
   a. Moisture content / solids content
      _____
   b. Do you have any laboratory information on it?
      _____

c. Is there a "feed analysis" (to be able to sell it)?

_____

3. What is the quality of your food waste?
   a. Is it contaminated?
      i. Packaging?

      _____

      ii. Cleaning products ?

      _____

      iii. Antibiotics ?

      _____

   [Follow up (prompted by these answers, ask):]

   b. What would it take to improve quality of your food waste?
      i. Source separation
         1. Costs

         _____

         2. Other constraints

         _____

      ii. Removing contaminants

      _____

4. What is the frequency, duration, volume / amount of the food waste at your facility?
   a. How many tons per day? _____
   b. How many gallons per day? _____
   c. How often is your garbage picked up? _____
   d. How much of the year? _____
   e. On-site storage options (how long do/can they hold on to it)

   _____

5. What is the current fate and finances of your food waste?
   a. Where does it go?

_____

b. What do you pay? _____

What do you get? _____

Anticipated increases in costs? _____

c. Do you have space for a second dumpster? _____

d. What about the smell? Is that a concern? _____

e. Concerned about customer confusion? Reduce issues to servers?

_____

Follow up

6. Would you be interested in participating in a voluntary food waste-recycling program? _____
7. Would you be interested in a food waste collection program similar to the grease collection system (where you are paid for the food waste instead of paying to dispose of it)? _____
8. What would be your likelihood of participation?

   (likely) (unsure) (not likely)
9. Are there any issues or ideas you have learned from grease collection that could or should be applied to food collection?

   _____

   _____

   _____
10. Do you have an interest in being kept informed of project developments?

    _____
11. Could we call for follow up questions? _____

    _____

THANK YOU

Haulers / Collectors

1. Business model and rate sheet – attach
2. Do your customers do any separation?

   _____

3. Minimum thresholds for source separation by collection trucks?

   _____

4. Anticipating residential food waste collection? _____

Follow up

5. Would you be interested in participating in a voluntary food waste-recycling program?

   _____

6. Would you be interested in a food waste collection program similar to the grease collection system (where you are paid for the food waste instead of paying to dispose of it)? _____
7. What would be your likelihood of participation?

   (likely) (unsure) (not likely)

8. Are there any issues or ideas you have learned from grease collection that could or should be applied to food collection?

   _____

9. Do you have an interest in being kept informed of project developments?

   _____

10. Could we call for follow up questions? _____

    _____

THANK YOU

Net present value for Anaerobic Digester processor - 75,000 tons per year. 2 MW output											
Year		-1	0	1	2	3	4	5	6	7	8
Fixed Capital Investment		$50,000	$12,500,000								
Electricity production - 2 MW annually				$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000
Total annual sales				$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000
Annual Manufacturing and Financing Costs											
Raw materials				$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000
Interest expense				$625,000	$585,600	$529,140	$473,328	$413,772	$355,680	$282,312	$210,906
AD O&M				$187,500	$187,500	$187,500	$187,500	$187,500	$187,500	$187,500	$187,500
CHP O&M				$105,120	$105,120	$105,120	$105,120	$105,120	$105,120	$105,120	$105,120
Total product cost				$2,417,620	$2,378,220	$2,321,760	$2,265,948	$2,206,392	$2,148,300	$2,074,932	$2,003,526
Annual depreciation											
General plant											
MACRS - 10 year double declining				$2,500,000	$2,000,000	$1,600,000	$1,280,000	$1,250,000	$1,250,000	$1,250,000	$1,250,000
MACRS remaining value				$10,000,000	$8,000,000	$6,400,000	$5,120,000	$3,870,000	$2,620,000	$1,370,000	$120,000
Straight line				$1,250,000	$1,250,000	$1,250,000	$1,250,000	$1,250,000	$1,250,000	$1,250,000	$1,250,000
Straightline remaining value				$11,250,000	$10,000,000	$8,750,000	$7,500,000	$6,250,000	$5,000,000	$3,750,000	$2,500,000
Total expenses + MACRS depreciation				$4,917,620	$4,378,220	$3,921,760	$3,545,948	$3,456,392	$3,398,300	$3,324,932	$3,253,526
Net revenue				-$597,620	-$58,220	$398,240	$774,052	$863,608	$921,700	$995,068	$1,066,474
Losses forward				$0	$0	-$1,308,220	-$2,159,980	-$2,635,928	-$3,022,320	-$2,100,620	-$1,105,552
Net income (before tax credits)				-$597,620	-$58,220	-$909,980	-$1,385,928	-$1,772,320	-$2,100,620	-$1,105,552	-$39,078
Federal ITC (30% of project - one time lump sum payment)				$3,750,000							
BETC tax credit (50% of project costs)				-$1,250,000	-$1,250,000	-$1,250,000	-$1,250,000	-$1,250,000	$0	$0	$0
Net taxable income				$1,902,380	-$1,308,220	-$2,159,980	-$2,635,928	-$3,022,320	-$2,100,620	-$1,105,552	-$39,078
Tax rate @ 35%				$665,833	$0	$0	$0	$0	$0	$0	$0
Annual cash income				$1,902,380	$1,941,780	$1,998,240	$2,054,052	$2,113,608	$2,171,700	$2,245,068	$2,316,474
Discount factor (10%)		1.1	1	0.909	0.826	0.753	0.683	0.62	0.56	0.513	0.466
Annual present value	$18,960,098			1,729,263	1,603,910	1,504,675	1,402,918	1,310,437	1,216,152	1,151,720	1,079,477
Total capital invest + interest		$55,000	$12,500,000								
Net present value	$6,410,098										
Internal rate of return	16.4%										
PV of income	36,758,880			3,926,880	3,568,320	3,252,960	2,950,560	2,678,400	2,419,200	2,216,160	2,013,120
Income tax payable	11,166,629			665,833	0	0	0	0	0	0	0
Discount factor (10%)			1	0.909	0.826	0.753	0.683	0.62	0.56	0.513	0.466
PV of taxes	3,369,634			$605,242	$0	$0	$0	$0	$0	$0	$0

9	10	11	12	13	14	15	16	17	18	19	20	Totals
												$12,550,000
$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$86,400,000
$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$4,320,000	$86,400,000
$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$30,000,000
$126,252	$50,556											$3,652,546
$187,500	$187,500	$187,500	$187,500	$187,500	$187,500	$187,500	$187,500	$187,500	$187,500	$187,500	$187,500	$3,750,000
$105,120	$105,120	$105,120	$105,120	$105,120	$105,120	$105,120	$105,120	$105,120	$105,120	$105,120	$105,120	$2,102,400
$1,918,872	$1,843,176	$1,792,620	$1,792,620	$1,792,620	$1,792,620	$1,792,620	$1,792,620	$1,792,620	$1,792,620	$1,792,620	$1,792,620	$39,504,946
$108,000	$2,400											$12,490,400
$12,000	$9,600											
$1,250,000	$1,250,000											$12,500,000
$1,250,000	$0											
										$0		
												$0
$2,026,872	$1,845,576	$1,792,620	$1,792,620	$1,792,620	$1,792,620	$1,792,620	$1,792,620	$1,792,620	$1,792,620	$1,792,620	$1,792,620	$48,410,106
$2,293,128	$2,474,424	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$29,349,894
-$39,078	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$2,254,050	$2,474,424	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380
$0	$0											-$6,250,000
$2,254,050	$2,474,424	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380
$788,918	$866,048	$884,583	$884,583	$884,583	$884,583	$884,583	$884,583	$884,583	$884,583	$884,583	$884,583	$11,166,629
$2,401,128	$2,476,824	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$2,527,380	$46,895,054
0.424	0.385	0.35	0.319	0.29	0.263	0.239	0.218	0.198	0.18	0.164	0.149	
1,018,078	953,577	884,583	806,234	732,940	664,701	604,044	550,969	500,421	454,928	414,490	376,580	18,960,098
1,831,680	1,663,200	1,512,000	1,378,080	1,252,800	1,136,160	1,032,480	941,760	855,360	777,600	708,480	643,680	36,758,880
788,918	866,048	884,583	884,583	884,583	884,583	884,583	884,583	884,583	884,583	884,583	884,583	11,166,629
0.424	0.385	0.35	0.319	0.29	0.263	0.239	0.218	0.198	0.18	0.164	0.149	
$334,501	$333,429	$309,604	$282,182	$256,529	$232,645	$211,415	$192,839	$175,147	$159,225	$145,072	$131,803	$3,369,634

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Summary of State and Federal Renewable Energy Funding Incentives

Q&A

Oregon Business Energy Tax Credit

WHEN TO APPLY

Q. When should I apply for the tax credit?

A. You should apply for the tax credit and receive your preliminary certification approval before you start your project. If you must begin your project before receiving your approval, please understand that your project has not been reviewed and may not be eligible for a tax credit.

ELIGIBLE COSTS

Q. What project costs can I include when calculating the tax credit?

A. The tax credit is 35 percent of eligible project costs. For retrofit projects, energy-related project costs are eligible, including design, engineering, equipment and installation. For new construction or replacement of equipment that is beyond its useful service life, only *incremental* costs are eligible — the additional costs for making systems at least 10 percent more efficient than standard industry practice or required by building code.

Q. Is there a limit or cap on the costs that are eligible?

A. The cap is now $10 million in eligible costs per project.

CHOOSING A CONTRACTOR

Q. Do I have to choose a contractor on your approved contractor list?

A. No. There is no list of approved contractors.

AVAILABILITY OF TAX CREDITS

Q. Is there still a limit on the amount of tax credits that may be issued each year?

A. No. The rules have changed and there is no limit on the amount of tax credits issued in a year.

Q. Can I take my tax credit in one year?

A. If your eligible costs are $20,000 or less, you may take your full credit in one year. If the eligible costs are more than $20,000, you must take the tax credit over five years (10 percent of the tax credit the first and second year and 5 percent for the third, fourth and fifth years).

Q. If I can't use my tax credit this year, can I use it next year?

A. You can forward the full tax credit or any unused portion of your tax credit for up to eight years.

PASS-THROUGH OPTION

Q. Who may use the Pass-through Option?

A. A non-profit organization, public entity or any business with or without a tax liability may use the Pass-through Option. You transfer the tax credit project eligibility to an individual or business with an Oregon tax liability for a lump-sum payment of 25.5 percent of eligible project costs for a five-year tax credit; 30.5 percent for a one-year tax credit. The project owner, and pass-through partner must complete a Pass-

through Option Application form prior to receiving the final certification.

REBATES AND TAX CREDITS

Q. I'm upgrading my lighting and my utility is providing me a rebate. Is that the same thing as a tax credit?

A. No. A rebate is different than a tax credit. The rebate is money you get from your utility for the project. The tax credit is issued by the Oregon Department of Energy and is a dollar-for-dollar credit taken when you file your state income tax. You do **not** need to deduct the amount of the utility rebate from your eligible costs when completing the tax credit application.

CONSERVATION PROJECTS

Q. In addition to upgrading my lighting, I'm planning to upgrade my heating, ventilation and air conditioning systems and controls. Can I get a tax credit for these measures, too?

A. Yes. They all qualify for the tax credit. So do rental housing weatherization projects, higher efficiency pumps and motors, heat recovery from refrigeration systems and many other conservation projects. Most projects must reduce energy use by at least 10 percent to qualify. Lighting retrofit projects must be 25 percent more efficient than existing lighting.

Q. I plan on constructing a sustainable building soon. Will it qualify for a tax credit?

A. Yes. A sustainable building now qualifies for a tax credit if it receives a minimum Silver LEED™ rating from the U.S. Green Building Council. A special Sustainable Building Application form must be completed. The eligible projects costs are based on the building square footage.

LEASING

Q. I'm planning to lease qualifying equipment. Does the project qualify for a tax credit?

A. Yes, but only the owner of the energy project can apply for the tax credit. In a lease-purchase agreement, the business leasing the equipment is considered the project owner. But in a lease or lease-option contract, the business you're leasing the equipment from owns the project over the life of the contract. In that case, the business you are leasing the equipment from can claim the tax credit and you can negotiate a lower lease payment.

APPLYING FOR THE TAX CREDIT

Q. How do I apply for the tax credit?

A. You should complete the project-specific Application for Preliminary Certification Form (for example, a conservation project application form). These forms must be completed **before** the project is started. Once reviewed, the Oregon Department of Energy will mail you a Preliminary Certification and you may begin your project. Once your project is completed, you file an Application for Final Certification.

HELP WITH THE PAPERWORK

Q. Is the application process difficult?

A. It shouldn't be. Application forms are on the Department of Energy Web site (www.oregon.gov/energy). The architect, engineer or contractor working on your project should be able to assist you with the technical aspects of the paperwork, including the estimated project costs and energy savings. Call us toll-free at 1-800-221-8035 or (503) 378-4040 if you have any questions. For Rental Dwelling Weatherization projects, the City of Portland's Multi Family Assistance Program (MAPs) can help rental property owners statewide at 1-800-813-2201.

On June 12, the IRS issued allocations of authority to issue certain types of Build America Bonds. The County's authority is:

Recovery Zone Economic Development Bonds	$ 8,986,000
Recovery Zone Facility Bonds	$13,480,000

This authority is for the County exclusive of the City of Eugene, which has received a separate allocation.

Recovery Zone Economic Development Bonds are a type of Build America Bond. These bonds provide a 45% issuer interest subsidy, are issued before January 1, 2011, 100% of the net proceeds are to be used for one or more qualified economic development purposes in designated recovery zones and the bonds are to be designated by the County as RZEDB bonds

"Recovery zone" means

1. Any area designated by the issuer as having significant poverty, unemployment, rate of home foreclosures, or general distress;
2. Any area designed by the issuer as economically distressed by reason of the closure or realignment of a military installation pursuant to the Defense Base Closure and Realignment Act of 1990; and
3. Any area for which a designation as an empowerment zone or renewal community is in effect as of the effective date of ARRA (2-17-2009).

The "recovery zone" must be designated prior to the expenditure of funds, and the County may make the designation of recovery zone in any reasonable manner as it shall determine good faith in its discretion.

"Qualified economic purpose" means
Any expenditures for purposes of promoting development or other economic activity in a recovery zone, including

1. Capital expenditures paid or incurred with respect to property located in the recovery zone,
2. Expenditures for public infrastructure and construction of public facilities, and
3. Expenditures for job training and educational programs.

Recovery Zone Facility Bonds are a type of Build America Bond treated as exempt facility bonds and could be used for certain "conduit" or renewal projects, basically tax-exempt private activity bonds. The bonds are to be issued before January 1, 2011, 95% or more of net proceeds are to be used for recovery zone property and the bonds are to be designated by the County as RZFB.

"Recovery zone property" means
Section 168 property (basically depreciable business use real property) if

1. Such property was constructed, reconstructed, renovated or acquired by purchase after the date on which the designation of the recovery zone took effect
2. The original use of which in the recovery zone commences with the taxpayer; and
3. Substantially all of the use of which is in the recovery zone and is in the active conduct of a qualified business.

"Qualified business" means any trade or business except rental of resident real property or private or commercial golf course, country club, massage parlor, hot tub facility, suntan facility, racetrack or gambling facility or establishment whose principal business is sale of alcoholic beverages.

The County may waive any or all of the volume allocated. Upon such waiver, the State is authorized to reallocate the waived amount.

Build America Bonds – in addition to the above specific recovery bonds, the Act created two types of taxable bonds that carry subsidies or credits.

Issuer Subsidy BAB – Local governments may use these to finance any governmental purpose project. The bonds are taxable and the County would receive a direct subsidy from the US Treasury for 35% of the interest paid. The bonds can only be issued in 2009 and 2010 and cannot be used to refund existing debt.

Investor Subsidy BAB – Local governments may use these to finance any governmental purpose project. The bonds are taxable and the investor (purchaser of the bonds) receives a tax credit equal to 35% of the interest due the bond owner. The bonds can only be issued in 2009 and 2010 and may be used for refundings.

Oregon counties, cities and ARRA Bond authorization amounts

Area	Residual	Recovery Zone Economic Development Bond	Recovery Zone Facility Bond
Clackamas County, OR	Residual	8,879,000	13,319,000
Columbia County, OR		1,059,000	1,589,000
Coos County, OR		694,000	1,040,000
Crook County, OR		1,950,000	2,925,000
Curry County, OR		504,000	756,000
Deschutes County, OR		10,795,000	16,192,000
Douglas County, OR		6,961,000	10,441,000
Eugene city, OR		7,389,000	11,083,000
Grant County, OR		280,000	419,000
Harney County, OR		62,000	93,000
Hood River County, OR		79,000	119,000
Jackson County, OR		7,937,000	11,906,000
Jefferson County, OR		1,336,000	2,003,000
Josephine County, OR		1,280,000	1,921,000
Klamath County, OR		911,000	1,367,000
Lake County, OR		166,000	248,000
Lane County, OR	Residual	8,986,000	13,480,000
Lincoln County, OR		428,000	642,000
Linn County, OR		3,234,000	4,850,000
Malheur County, OR		259,000	388,000
Marion County, OR	Residual	2,412,000	3,618,000
Multnomah County, OR	Residual	3,624,000	5,435,000
Polk County, OR	Residual	752,000	1,129,000
Portland city, OR		13,548,000	20,323,000
Salem city, OR		2,002,000	3,002,000
Tillamook County, OR		952,000	1,429,000
Union County, OR		1,187,000	1,781,000
Wallowa County, OR		504,000	756,000
Wasco County, OR		321,000	481,000
Washington County, OR	Residual	12,844,000	19,267,000
Wheeler County, OR		17,000	26,000
Yamhill County, OR		2,098,000	3,147,000

State of Oregon Energy Loan Program
Questions & Answers

What is eligible?
Most energy efficiency measures, renewable energy measures and waste heat projects are eligible. See the list to the right for energy project ideas. Loans can pay for related costs such as engineering and design, permits, loan fees, and project management. Consider using an energy loan to supplement your construction or remodeling project's financing, handle cost-overruns or provide for more energy-efficient components.

An applicant that must obtain an energy facility site certificate under ORS 469.300 to 469.520 for a project is not eligible for a loan except if the project is exempted from the site certificate requirement by ORS 469.320(2) or other exemptions granted by the Energy Facility Siting Council.

How can I identify possible energy projects?
If your public agency facility uses more than $10,000 in energy per year, you may qualify for a free energy analysis from the Energy Loan Program. Your utility may offer an energy analysis. Other resources may be available in your community. Call us for more information.

What incentives are available?
Many commercial projects qualify for both the Business Energy Tax Credit (BETC) and a low-interest loan. Check with us about the availability of rebates, tax credits and other incentives.

What are the rates?
Loans are fixed rate. Rates vary depending on the type of borrower and project and when the Loan Program sold bonds. Call the Oregon Department of Energy for current interest rates. Commercial renewable energy and waste heat projects may qualify for lower tax-exempt rates. Interest rate is just one consideration in finding your best deal, however. Compare the benefits of an energy loan with those of other financing sources. Link to our Rates page for more information.

What about fees?
The application fee is .1 percent (up to $2500) of the amount requested. The Energy Loan Program also charges an underwriting fee of .5 percent, with a $500 minimum and $5,000 maximum. Any amount of the underwriting fee greater than $500 is credited to the
1 percent loan fee at closing. The loan fee can be paid from loan proceeds. Link to our Fees page for more information.

What are the terms?
Loans usually range between $20,000 and $20 million and loan terms usually

range from five to 15 years, depending on available funds and project type. Longer terms may be available. The loan term must be within the expected life of the project

What will my loan payment be?
First, find the estimated interest rate from the Rates Schedule for your type of loan. Then, using our calculator, enter the amount of your loan, term, interest rate and select the payment type. To determine your payment, just push the calculate button. It's that easy!

How long does it take?
For public agencies, upon receipt of a completed application package, loans under $100,000 can be processed within three weeks and loans over $100,000 within two months. For commercial borrowers, loan review can take a few weeks for smaller loans and up to several months for large and complex projects. Larger projects qualifying for tax-exempt rates may need an additional three months so the Energy Loan Program can sell bonds. We recommend a pre-application meeting with a loan officer.

Is collateral required?
Yes. Adequate collateral for government borrowers is the equipment being financed and the borrower's pledge to make payments. Commercial loans must be fully secured. A first or second mortgage on the project's land, buildings, and equipment is usually pledged. Other assets may be pledged, if necessary.

How can I get an application?
Please contact the Oregon Department of Energy for loan applications. Some applications are also available on-line.

This is intended to be only a brief summary. We encourage you to contact the Energy Loan Program toll-free at 1-800-221-8035 or (503) 378-4040 in Salem for more information

U.S. DEPARTMENT OF
ENERGY

News Media Contact(s):
(202) 586-4940

For Immediate Release
July 29, 2009

Obama Administration Announces Billions in Lending Authority for Renewable Energy Projects and to Modernize the Grid

Loan Guarantees Will Help Create New Jobs while Fostering Clean Energy Innovation

Washington, DC – U.S. Energy Secretary Steven Chu announced today that the Department of Energy will provide up to $30 billion in loan guarantees, depending on the applications and market conditions, for renewable energy projects. Another $750 million will support several billion dollars more in loan guarantees for projects that increase the reliability, efficiency and security of the nation's transmission system. The two new loan guarantee solicitations announced today are being funded partly through the Recovery Act and partly through 2009 appropriations.

"These investments will be used to create jobs, spur the development of innovative clean energy technologies, and help ensure a smart, strong and secure grid that will deliver renewable power more effectively and reliably," said Secretary Chu. "This administration has set a goal of doubling renewable electricity generation over the next three years. To achieve that goal, we need to accelerate renewable project development by ensuring access to capital for advanced technology projects. We also need a grid that can move clean energy from the places it can be produced to the places where it can be used and that can integrate variable sources of power, like wind and solar."

The lending authority includes:

- Up to $8.5 billion in lending authority supported by 2009 annual appropriations for renewable energy.
- Up to $2 billion in subsidy costs, provided by the Recovery Act, to support billions in loans for renewable energy and electric power transmission projects.
- Up to $500 million in subsidy costs to support loans for cutting edge biofuel projects funded by the Recovery Act.
- Up to $750 million in subsidy costs, provided by the Recovery Act, to support loans for large transmission infrastructure projects in the U.S. that use commercial technologies and begin construction by September 30, 2011.

The two solicitations issued today mark the sixth and seventh rounds of solicitations by the Department's Loan Guarantee Program, which encourages the commercial use of new or improved energy technologies to help foster clean energy projects. Applications will be accepted over the next 45 days. The Department has streamlined its processes to accelerate these new loan solicitations. By investing in both renewable energy technology for generating electricity and technologies to modernize the country's transmission system, the Recovery Act targets the full integration of renewable energy sources onto the electric grid.

Read more information on this solicitation and the Department's Loan Guarantee Program. Additional loan guarantee solicitations funded by the Recovery Act will be announced soon.

Rural Energy for America Program
Guaranteed Loan Program (REAP LOAN)

The REAP Guaranteed Loan Program encourages the commercial financing of renewable energy (bioenergy, geothermal, hydrogen, solar, wind and hydro power) and energy efficiency projects. Under the program, project developers will work with local lenders, who in turn can apply to USDA Rural Development for a loan guarantee up to 85 percent of the loan amount.

How does the B&I Guaranteed Loan Program compare to the Rural Energy for America Program Guaranteed Loan and Grant?
To assist you in determining which program best fit your needs this comparison chart identifies the programs common and distinct requirements in an easy to read format.

Guaranteed Loan Specifications
Loans Limits:

- Loans up to 75% of the project's cost
- Maximum of $25 million, minimum of $5,000

Maximum percentage of guarantee (applies to whole loan):

- 85% for loan of $600,000 or less
- 80% for loans greater than $600,000 but $5 million or less
- 70% for loans greater than $5 million up to $10 million
- 60% for loans greater than $10 millon up to $25 millon

Fees and Interest Rates

- Lender's customary interest rate, fixed or variable, negotiated by lender and business Lender's customary fees, negotiated by lender and business

- One-time guarantee fee equal to 1% of guaranteed amount
- Annual renewal fee

Benefits to Businesses
Benefits include higher loan amounts, stronger loan applications, lower interest rates and longer repayment terms that can assist businesses that may not qualify for conventional lender financing.

Benefits to Lenders
Lender benefits include expanding lender's loan portfolio, allowing lenders to make loans above loan limits, protecting guaranteed portion of loan against loss by the Federal Government, existing secondary market for REAP guarantees, helping to satisfy Community Reinvestment Act (CRA) requirements, and allowing lenders to use their own forms, loan documents, and security instruments.

Eligibility: Borrowers, Lenders, Location
New definition being determined. Borrowers must be an agricultural producer or rural small business. Agricultural producers must gain 50% or more of their gross income from their agricultural operations. An entity is considered a small business in accordance with the Small Business Administration's (SBA) small business size standards NAICS code. (http://www.sba.gov/size/index.html). Most lenders are eligible, including national and state-chartered banks, Farm Credit System banks and savings and loan associations. Other lenders may be eligible if approved by USDA.

Eligible Project Costs
Eligible project costs include: 1) Post-application purchase and installation of equipment, 2)Post-application construction or improvements, 3) Energy audits or assessments, 4) Permit or license fees, 5) Professional service fees, 6) Feasibility studies and technical reports, 7) Business plans, 8) Retrofitting, 9) Construction of a new energy efficient facility only when the facility is used for the same purpose, is approximately the same size, and based on the energy audit will provide more energy savings than improving an existing facility, 10) Working capital, 11) Land acquisition.

How to Apply
To apply for funding for the Guaranteed Loan Program, please contact

Don Hollis, USDA Rural Development
1229 SE Third Street, Suite A
Pendleton, OR 97801-4198
(541) 278-8049, Ext. 129
Don.Hollis@or.usda.gov

Payments for Specified Energy Property in Lieu of Tax Credits
under the
American Recovery and Reinvestment Act of 2009
Program Guidance

Under Section 1603 of the American Recovery and Reinvestment Tax Act of 2009 (Section 1603), the United States Department of the Treasury (Treasury) makes payments to eligible persons who place in service specified energy property and apply for such payments. The purpose of the payment is to reimburse eligible applicants for a portion of the expense of such property. Eligible property under this program includes only property used in a trade or business or held for the production of income. Nonbusiness energy property described in section 25C of the Internal Revenue Code (IRC) and residential energy efficient property described in section 25D of the IRC do not qualify for payments under this program but may qualify for tax credits under those provisions.

By receiving payments for property under section 1603, applicants are electing to forego tax credits under sections 48 and 45 of the IRC with respect to such property for the taxable year in which the payment is made or any subsequent taxable year. Applicants must agree to the terms and conditions applicable to the Section 1603 program.

This guidance establishes the procedures for applying for payments under the Section 1603 program and is intended to clarify the eligibility requirements under the program. Treasury welcomes questions about the program and the application process at 1603Questions@do.treas.gov.

Application Procedures

Applicants interested in receiving payments under Section 1603 may submit an application on-line by going to www.treasury.gov/recovery. Applications may only be submitted after the property to which the application relates is placed in service, or is under construction. A completed application will include the signed and complete application form; supporting documentation; signed Terms and Conditions; and complete payment information. All applications must be received before the statutory deadline of October 1, 2011

Credit Termination Date and Applicable Payment Percentage

The following chart lists the Credit Termination Date and the applicable percentage of eligible cost basis used in computing the payment for each specified energy property.

Specified Energy Property	Credit Termination Date	Applicable Percentage of Eligible Cost Basis
Large Wind	Jan 1, 2013	30%
Closed-Loop Biomass Facility	Jan 1, 2014	30%
Open-loop Biomass Facility	Jan 1, 2014	30%
Geothermal under IRC sec. 45	Jan 1, 2014	30%
Landfill Gas Facility	Jan 1, 2014	30%
Trash Facility	Jan 1, 2014	30%
Qualified Hydropower Facility	Jan 1, 2014	30%
Marine & Hydrokinetic	Jan 1, 2014	30%
Solar	Jan 1, 2017	30%
Geothermal under IRC sec. 48	Jan 1, 2017	10%*
Fuel Cells	Jan 1, 2017	30%**

Microturbines	Jan 1, 2017	10%***
Combined Heat & Power	Jan 1, 2017	10%
Small Wind	Jan 1, 2017	30%
Geothermal Heat Pumps	Jan 1, 2017	10%

Qualified FacilitiesDefinition:

Open-loop biomass facilities: An open-loop biomass facility uses open-loop biomass to produce electricity. Open-loop biomass is any agriculture livestock waste nutrients or any solid, nonhazardous, cellulosic waste material or any lignin material that is derived from qualified sources.

• Agricultural livestock waste nutrients are agriculturale 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.

• The qualified sources from which solid, nonhazardous, cellulosic waste material or any lignin material must be derived are:

Any of the following forest-related resources: mill and harvesting residues, precommercial thinnings, slash, and brush;

Solid wood waste materials, including waste pallets, crates, dunnage, manufacturing and construction wood wastes (other than pressure-treated, chemically-treated, or painted wood wastes), landscape or right-of-way tree trimmings, but not including municipal solid waste, gas derived from the biodegradation of solid waste, or paper that is commonly recycled; and

Agriculture sources, including orchard tree crops, vineyard, grain, legumes, sugar, and other crop by-products or residues.

An open-loop biomass facility does not include:

- A facility that burns fossil fuel (co-firing) beyond such fossil fuel required for startup and flame stabilization; or
- A facility using agricultural livestock waste nutrients that has a nameplate capacity rating of less than 150 kilowatts.

BCAP – CHST Eligible Materials List

BCAP –CHST Eligible Materials Definitions

Renewable biomass is defined for purposes of the CHST matching payment program to include the following:

(1) Materials, pre-commercial thinnings, or invasive species from National Forest System land and public lands (as defined in section 103 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1702)) that:

(a) Are byproducts of preventive treatments that are removed to reduce hazardous fuels, to reduce or contain disease or insect infestation, or to restore ecosystem health;

(b) Would not otherwise be used for higher-value products; and

(c) Are harvested in accordance with applicable law and land management plans and the requirements for old-growth maintenance, restoration, and management direction of section 102 (e)(2), (3), and (4) of the Healthy Forests Restoration Act of 2003 (16 U.S.C. 6512) and large-tree retention of subsection (f) or

(2) Any organic matter that is available on a renewable or recurring basis from non-Federal land or land belonging to an Indian or Indian tribe that is held in trust by the United States or subject to a restriction against alienation imposed by the United States, including: Renewable plant material (including feed grains, other agricultural commodities, other plants and trees, algae), and waste material (including crop residue, other vegetative waste material (including wood waste and wood residues), animal waste and byproducts (including fats, oils, greases, and manure), food waste, and yard waste).

Eligible Material is, for purposes of the CHST matching payment program, renewable biomass with the following exclusions:

(1) Harvested grains, fiber, or other commodities eligible to receive payments under Title I of the 2008 Farm Bill;

(2) Animal waste and animal waste-byproducts including fats, oils, greases, and manure;

(3) Food waste and yard waste; or

(4) Algae.

Biobased CHST product means a product, determined by the Deputy Administrator to be a commercial or industrial product (other than food or feed) that is:

(1) Composed in whole, or in significant part, of biological products, including renewable domestic agricultural materials and forestry materials or

(2) An intermediate ingredient or feedstock.

Biobased product does not mean commercially produced timber, lumber, wood pulp or other finished wood products.

Food waste means a material composed primarily of food items, or originating from food items, or compounds from domestic, municipal, food service operations, or commercial sources, including food processing wastes, residues, or scraps.

Yard waste means material composed primarily of yard maintenance, cleanup materials, or debris removal items, originating from residential, municipal or commercial yards, lawns, landscaped areas, or related sites.

FSA
FARM SERVICE AGENCY

BCAP – CHST Eligible Materials List

National Forest System and BLM Lands

Federal Woody Resources

Eligible	Ineligible
Pre- & Non-Commercially Valued Forest Materials (that WOULD NOT otherwise be used for higher-value products) including / 1: • Forest thinnings materials • Forest, harvest, and post-disaster slash (branches, tops, and disaster debris) • Hardwood chips • Softwood chips • Cutoffs • Bark • Tree and shrub species without timber, lumber, or wood pulp value	Commercial Forest Materials (that WOULD otherwise be used for higher-value products) including: • Timber • Lumber • Wood Pulp • Any other finished wood products such as: o Mulch o Black liquor o Paper products

Non-Federal Land

(including land belonging to an Indian or Indian Tribe that is held in trust by the United States)

Non-Federal Woody Resources

Eligible	Ineligible
Renewable Plant Material including / 1: • Trees and Shrubs such as: o Forest thinnings materials o Forest, harvest, and post-disaster slash (branches, tops, and disaster debris) o Hardwood chips o Softwood chips o Cutoffs o Bark	

Agriculture Resources

Eligible	Ineligible
Renewable Plant Material including: • Feed grains / 2 • Other agricultural commodities / 2 Waste Material including: • Crop residues / 3 For example: corn stover, corn cobs, rice hulls, wheat straw and bagasse are eligible after the commodity crop is harvested from the plant Note: See endnotes at end of Table	Any crop eligible to receive payments, including loans, under List 8-LP par. 126 or 7-CN (Title I of the Food, Conservation, and Energy Act of 2008), or an amendment made by that title, including, but not limited to: Grains, Kernels, Oilseeds, and other commodities such as: • *Row Crops/Small Grain Plants* o Corn o Wheat o Grain sorghum o Barley o Oats o Cotton o Rice o Soybeans

BCAP – CHST Eligible Materials List

Agriculture Resources (Continued)	
Eligible	**Ineligible**
	• *Oilseed Plants* o Sunflower seed o Rapeseed o Canola o Safflower o Flaxseed o Mustard seed o Crambe o Sesame seed o Any other oilseed • *Pulse Crops* o Dry peas o Lentils o Chickpeas • *Other Products* o Peanuts o Sugar o Honey o Wool o Mohair o Dairy products For example: Hays and silage derived from the above Title I crops are ineligible because the commodity crop is not harvested from the plant
Herbaceous Resources	
Eligible	**Ineligible**
Renewable Plant Material including / 1: • Forbs • Legumes • Grasses • Vines • Mosses	
Other Renewable Plant Material	
Eligible	**Ineligible**
	Algae including: • Algal-residue or by-products • Algal-derived oils • Lichens composed, in part or whole, of algae

BCAP – CHST Eligible Materials List

Waste Materials	
Eligible	**Ineligible**

Other Vegetative Waste Material including / 1:
• Roadway maintenance cuttings
• Non-edible food processing waste such as:
  o Corn cobs
  o Corn husks
• Non-edible plant processing waste and scraps
• Non-edible fats, oils, and greases derived from plants
• Wood waste such as:
  o Orchard, vineyard, and related woody waste renewable biomass
• Wood residues such as:
  o Wood mill waste and scraps including:
  ▪ Sawdust
• Intermediately processed biomass derived from eligible sources such as:
  o Pellets
  o Briquettes
  o Other processed or condensed renewable biomass
	All Animal Waste & Animal Waste Byproduct including:
	• Grease
	• Oil
	• Fats
	• Manure
	All Food Waste including:
	• Domestic/residential/municipal food waste
	• Other food service operations waste
	• Edible food processing waste
	All Yard Waste Derived from Domestic, Residential, or Municipal Sources including:
	• Municipal solid waste
	• Construction and demolition waste or salvage products
	• Leaves
	• Grass
	• Tree branches

/ 1 Renewable biomass derived from invasive or noxious species must be handled in accordance to **Executive Order 13112 of February 3, 1999 "Invasive Species."** Hence, applicable CHST eligible materials cannot be collected, harvested, or transported during reproductive, or other, phases that may propagate their spread or establishment.

/ 2 See ineligible agriculture resources for exclusions related any crop eligible to receive payments under Title I of the Food, Conservation, and Energy Act of 2008 or an amendment made by that title.

/ 3 Per the Notice of Funding Availability published in the Federal Register on June 11th, 2009, NOT more than twenty percent of the funds utilized under this Notice will be for matching payments to eligible material owners for the collection, harvest, storage and transportation of crop residue from commodities eligible to receive payments under Title I of the 2008 Farm Bill.

Note: Revisions made by EPAct 2005 are included in this document.

TITLE 26. INTERNAL REVENUE CODE
SUBTITLE A. INCOME TAXES
CHAPTER 1. NORMAL TAXES AND SURTAXES
SUBCHAPTER A. DETERMINATION OF TAX LIABILITY
PART IV. CREDITS AGAINST TAX
SUBPART D. BUSINESS RELATED CREDITS

26 USC § 45 (2005)

26 USC § 45. Electricity produced from certain renewable resources, etc.

(a) General rule. For purposes of section 38 [26 USCS § 38], the renewable electricity production credit for any taxable year is an amount equal to the product of--

(1) 1.5 cents, multiplied by

(2) the kilowatt hours of electricity--

(A) produced by the taxpayer--

(i) from qualified energy resources, and

(ii) at a qualified facility during the 10-year period beginning on the date the facility was originally placed in service, and

(B) sold by the taxpayer to an unrelated person during the taxable year.

(b) Limitations and adjustments.

(1) Phaseout of credit. The amount of the credit determined under subsection (a) shall be reduced by an amount which bears the same ratio to the amount of the credit (determined without regard to this paragraph) as--

(A) the amount by which the reference price for the calendar year in which the sale occurs exceeds 8 cents, bears to

(B) 3 cents.

(2) Credit and phaseout adjustment based on inflation. The 1.5 cent amount in subsection (a), the 8 cent amount in paragraph (1), the $ 4.375 amount in subsection (e)(8)(A), and in subsection (e)(8)(B)(i) the reference price of fuel used as a feedstock (within the meaning of subsection (c)(7)(A)) in 2002 shall each be adjusted by multiplying such amount by the inflation adjustment factor for the calendar year in which the sale occurs. If any amount as increased under the preceding sentence is not a multiple of 0.1 cent, such amount shall be rounded to the nearest multiple of 0.1 cent.

(3) Credit reduced for grants, tax-exempt bonds, subsidized energy financing, and other credits. The amount of the credit determined under subsection (a) with respect to any project for any taxable year (determined after the application of paragraphs (1) and (2)) shall be reduced by the amount which is the product of the amount so determined for such year and the lesser of 1/2 or a fraction--

(A) the numerator of which is the sum, for the taxable year and all prior taxable years, of--

(i) grants provided by the United States, a State, or a political subdivision of a State for use in connection with the project,

(ii) proceeds of an issue of State or local government obligations used to provide financing for the project the interest on which is exempt from tax under section 103 [26 USCS § 103],

(iii) the aggregate amount of subsidized energy financing provided (directly or indirectly) under a Federal, State, or local program provided in connection with the project, and

(iv) the amount of any other credit allowable with respect to any property which is part of

the project, and

(B) the denominator of which is the aggregate amount of additions to the capital account for the project for the taxable year and all prior taxable years.

The amounts under the preceding sentence for any taxable year shall be determined as of the close of the taxable year. This paragraph shall not apply with respect to any facility described in subsection (d)(2)(A)(ii).

(4) Credit rate and period for electricity produced and sold from certain facilities.

(A) Credit rate. In the case of electricity produced and sold in any calendar year after 2003 at any qualified facility described in paragraph (3), (5), (6), (7), or (9) of subsection (d), the amount in effect under subsection (a)(1) for such calendar year (determined before the application of the last sentence of paragraph (2) of this subsection) shall be reduced by one-half.

(B) Credit period.

(i) In general. Except as provided in clause (ii) or clause (iii), in the case of any facility described in paragraph (3), (4), (5), (6), or (7) of subsection (d), the 5-year period beginning on the date the facility was originally placed in service shall be substituted for the 10-year period in subsection (a)(2)(A)(ii).

(ii) Certain open-loop biomass facilities. In the case of any facility described in subsection (d)(3)(A)(ii) placed in service before the date of the enactment of this paragraph [enacted Oct. 22, 2004], the 5-year period beginning on January 1, 2005, shall be substituted for the 10-year period in subsection (a)(2)(A)(ii).

(iii) Termination. Clause (i) shall not apply to any facility placed in service after the date of the enactment of this clause [enacted Aug. 8, 2005].

(c) Resources. For purposes of this section:

(1) In general. The term "qualified energy resources" means--

(A) wind,

(B) closed-loop biomass,

(C) open-loop biomass,

(D) geothermal energy,

(E) solar energy,

(F) small irrigation power,

(G) municipal solid waste, and

(H) qualified hydropower production.

(2) Closed-loop biomass. The term "closed-loop biomass" means any organic material from a plant which is planted exclusively for purposes of being used at a qualified facility to produce electricity.

(3) Open-loop biomass.

(A) In general. The term "open-loop biomass" means--

(i) any agricultural livestock waste nutrients, or

(ii) any solid, nonhazardous, cellulosic waste material or any lignin material which is segregated from other waste materials and which is derived from--

(I) any of the following forest-related resources: mill and harvesting residues, precommercial thinnings, slash, and brush,

(II) solid wood 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

(III) agriculture sources, including orchard tree crops, vineyard, grain, legumes, sugar, and other crop by-products or residues.

Such term shall not include closed-loop biomass or biomass burned in conjunction with fossil fuel (cofiring) beyond such fossil fuel required for startup and flame stabilization.

(B) Agricultural livestock waste nutrients.

(i) In general. The term "agricultural livestock waste nutrients" means agricultural livestock manure and litter, including wood shavings, straw, rice hulls, and other bedding material for the disposition of manure.

(ii) Agricultural livestock. The term "agricultural livestock" includes bovine, swine, poultry, and sheep.

(4) Geothermal energy. The term "geothermal energy" means energy derived from a geothermal deposit (within the meaning of section 613(e)(2) [26 USCS § 613(e)(2)]).

(5) Small irrigation power. The term "small irrigation power" means power--

(A) generated without any dam or impoundment of water through an irrigation system canal or ditch, and

(B) the nameplate capacity rating of which is not less than 150 kilowatts but is less than 5 megawatts.

(6) Municipal solid waste. The term "municipal solid waste" has the meaning given the term "solid waste" under section 2(27) of the Solid Waste Disposal Act (42 U.S.C. 6903).

(7) Refined coal.

(A) In general. The term "refined coal" means a fuel which--

(i) is a liquid, gaseous, or solid fuel produced from coal (including lignite) or high carbon fly ash, including such fuel used as a feedstock,

(ii) is sold by the taxpayer with the reasonable expectation that it will be used for purpose of producing steam,

(iii) is certified by the taxpayer as resulting (when used in the production of steam) in a qualified emission reduction, and

(iv) is produced in such a manner as to result in an increase of at least 50 percent in the market value of the refined coal (excluding any increase caused by materials combined or added during the production process), as compared to the value of the feedstock coal.

(B) Qualified emission reduction. The term "qualified emission reduction" means a reduction of at least 20 percent of the emissions of nitrogen oxide and either sulfur dioxide or mercury released when burning the refined coal (excluding any dilution caused by materials combined or added during the production process), as compared to the emissions released when burning the feedstock coal or comparable coal predominantly available in the marketplace as of January 1, 2003.

(8) Qualified hydropower production.

(A) In general. The term "qualified hydropower production" means--

(i) in the case of any hydroelectric dam which was placed in service on or before the date of the enactment of this paragraph [enacted Aug. 8, 2005], the incremental hydropower production for the taxable year, and

(ii) in the case of any nonhydroelectric dam described in subparagraph (C), the hydropower production from the facility for the taxable year.

(B) Determination of incremental hydropower production.

(i) In general. For purposes of subparagraph (A), incremental hydropower production for any taxable year shall be equal to the percentage of average annual hydropower production at the facility attributable to the efficiency improvements or additions of capacity placed in service after the date of the enactment of this paragraph, determined by using the same water flow information used to determine an historic average annual hydropower production baseline for such facility. Such percentage and baseline shall be certified by the Federal Energy Regulatory Commission.

(ii) Operational changes disregarded. For purposes of clause (i), the determination of incremental hydropower production shall not be based on any operational changes at such facility not directly associated with the efficiency improvements or additions of capacity.

(C) Nonhydroelectric dam. For purposes of subparagraph (A), a facility is described in this subparagraph if--

(i) the facility is licensed by the Federal Energy Regulatory Commission and meets all other applicable environmental, licensing, and regulatory requirements,

(ii) the facility was placed in service before the date of the enactment of this paragraph [enacted Aug. 8, 2005] and did not produce hydroelectric power on the date of the enactment of this paragraph [enacted Aug. 8, 2005], and

(iii) turbines or other generating devices are to be added to the facility after such date to produce hydroelectric power, but only if there is not any enlargement of the diversion structure, or construction or enlargement of a bypass channel, or the impoundment or any withholding of any additional water from the natural stream channel.

(9) Indian coal.

(A) In general. The term "Indian coal" means coal which is produced from coal reserves which, on June 14, 2005--

(i) were owned by an Indian tribe, or

(ii) were held in trust by the United States for the benefit of an Indian tribe or its members.

(B) Indian tribe. For purposes of this paragraph, the term "Indian tribe" has the meaning given such term by section 7871(c)(3)(E)(ii) [26 USCS § 7871(c)(3)(E)(ii)].

(d) Qualified facilities. For purposes of this section:

(1) Wind facility. In the case of a facility using wind to produce electricity, the term "qualified facility" means any facility owned by the taxpayer which is originally placed in service after December 31, 1993, and before January 1, 2008.

(2) Closed-loop biomass facility.

(A) In general. In the case of a facility using closed-loop biomass to produce electricity, the term "qualified facility" means any facility--

(i) owned by the taxpayer which is originally placed in service after December 31, 1992, and before January 1, 2008, or

(ii) owned by the taxpayer which before January 1, 2008, 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 pilot project of the Commodity Credit Corporation as described in 65 Fed. Reg. 63052.

(B) Special rules. In the case of a qualified facility described in subparagraph (A)(ii)--

(i) the 10-year period referred to in subsection (a) shall be treated as beginning no earlier than the date of the enactment of this clause [enacted Oct. 22, 2004],

(ii) the amount of the credit determined under subsection (a) with respect to the facility shall be an amount equal to the amount determined without regard to this clause multiplied by the ratio of the thermal content of the closed-loop biomass used in such facility to the thermal content of all fuels used in such facility, and

(iii) if the owner of such facility is not the producer of the electricity, the person eligible for the credit allowable under subsection (a) shall be the lessee or the operator of such facility.

(3) Open-loop biomass facilities.

(A) In general. In the case of a facility using open-loop biomass to produce electricity, the term "qualified facility" means any facility owned by the taxpayer which--

(i) in the case of a facility using agricultural livestock waste nutrients--

(I) is originally placed in service after the date of the enactment of this subclause [enacted Oct. 22, 2004] and before January 1, 2008, and

(II) the nameplate capacity rating of which is not less than 150 kilowatts, and

(ii) in the case of any other facility, is originally placed in service before January 1, 2008.

(B) Credit eligibility. In the case of any facility described in subparagraph (A), if the owner of such facility is not the producer of the electricity, the person eligible for the credit allowable under subsection (a) shall be the lessee or the operator of such facility.

(4) Geothermal or solar energy facility. In the case of a facility using geothermal or solar energy to produce electricity, the term "qualified facility" means any facility owned by the taxpayer which is originally placed in service after the date of the enactment of this paragraph [enacted Oct. 22, 2004] and before January 1, 2008 (January 1, 2006, in the case of a facility using solar energy). Such term shall not include any property described in section 48(a)(3) [26 USCS § 48(a)(3)] the basis of which is taken into account by the taxpayer for purposes of determining the energy credit under section 48 [26 USCS § 48].

(5) Small irrigation power facility. In the case of a facility using small irrigation power to produce electricity, the term "qualified facility" means any facility owned by the taxpayer which is originally placed in service after the date of the enactment of this paragraph [enacted Oct. 22, 2004] and before January 1, 2008.

(6) Landfill gas facilities. In the case of a facility producing electricity from gas derived from the biodegradation of municipal solid waste, the term "qualified facility" means any facility owned by the taxpayer which is originally placed in service after the date of the enactment of this paragraph [enacted Oct. 22, 2004] and before January 1, 2008.

(7) Trash combustion facilities. In the case of a facility which burns municipal solid waste to produce electricity, the term "qualified facility" means any facility owned by the taxpayer which is originally placed in service after the date of the enactment of this paragraph [enacted Oct. 22, 2004] and before January 1, 2008. Such term shall include a new unit placed in service in connection with a facility placed in service on or before the date of the enactment of this paragraph [enacted Oct. 22, 2004], but only to the extent of the increased amount of electricity produced at the facility by reason of such new unit.

(8) Refined coal production facility. In the case of a facility that produces refined coal, the term "refined coal production facility" means a facility which is placed in service after the date of the enactment of this paragraph [enacted Oct. 22, 2004] and before January 1, 2009.

(9) Qualified hydropower facility. In the case of a facility producing qualified hydroelectric production described in subsection (c)(8), the term "qualified facility" means--

(A) in the case of any facility producing incremental hydropower production, such facility but only to the extent of its incremental hydropower production attributable to efficiency improvements or additions to capacity described in subsection (c)(8)(B) placed in service after the date of the enactment of this paragraph [enacted Aug. 8, 2005] and before January 1, 2008, and

(B) any other facility placed in service after the date of the enactment of this paragraph [enacted Aug. 8, 2005] and before January 1, 2008.

(C) Credit period. In the case of a qualified facility described in subparagraph (A), the 10-year period referred to in subsection (a) shall be treated as beginning on the date the efficiency improvements or additions to capacity are placed in service.

(10) Indian coal production facility. In the case of a facility that produces Indian coal, the term "Indian coal production facility" means a facility which is placed in service before January 1, 2009.

(e) Definitions and special rules. For purposes of this section--

(1) Only production in the United States taken into account. Sales shall be taken into account under this section only with respect to electricity the production of which is within--

(A) the United States (within the meaning of section 638(1) [26 USCS § 638(1)]), or

(B) a possession of the United States (within the meaning of section 638(2) [26 USCS § 638(2)]).

(2) Computation of inflation adjustment factor and reference price.

(A) In general. The Secretary shall, not later than April 1 of each calendar year, determine and publish in the Federal Register the inflation adjustment factor and the reference price for such calendar year in accordance with this paragraph.

(B) Inflation adjustment factor. The term "inflation adjustment factor" means, with respect to a calendar year, a fraction the numerator of which is the GDP implicit price deflator for the preceding calendar year and the denominator of which is the GDP implicit price deflator for the calendar year 1992. The term "GDP implicit price deflator" means the most recent revision of the implicit price deflator for the gross domestic product as computed and published by the Department of Commerce before March 15 of the calendar year.

(C) Reference price. The term "reference price" means, with respect to a calendar year, the Secretary's determination of the annual average contract price per kilowatt hour of electricity generated from the same qualified energy resource and sold in the previous year in the United States. For purposes of the preceding sentence, only contracts entered into after December 31, 1989, shall be taken into account.

(3) Production attributable to the taxpayer. In the case of a facility in which more than 1 person has an ownership interest, except to the extent provided in regulations prescribed by the Secretary, production from the facility shall be allocated among such persons in proportion to their respective ownership interests in the gross sales from such facility.

(4) Related persons. Persons shall be treated as related to each other if such persons would be treated as a single employer under the regulations prescribed under sectin 52(b) [26 USCS § 52(b)]. In the case of a corporation which is a member of an affiliated group of corporations filing a consolidated return, such corporation shall be treated as selling electricity to an unrelated person if such electricity is sold to such a person by another member of such group.

(5) Pass-thru in the case of estates and trusts. Under regulations prescribed by the Secretary, rules similar to the rules of subsection (d) of section 52 [26 USCS § 52] shall apply.

(6) [Deleted]

(7) Credit not to apply to electricity sold to utilities under certain contracts.

(A) In general. The credit determined under subsection (a) shall not apply to electricity--

(i) produced at a qualified facility described in subsection (d)(1) which is placed in service by the taxpayer after June 30, 1999, and

(ii) sold to a utility pursuant to a contract originally entered into before January 1, 1987 (whether or not amended or restated after that date).

(B) Exception. Subparagraph (A) shall not apply if--

(i) the prices for energy and capacity from such facility are established pursuant to an amendment to the contract referred to in subparagraph (A)(ii),

(ii) such amendment provides that the prices set forth in the contract which exceed avoided cost prices determined at the time of delivery shall apply only to annual quantities of electricity (prorated for partial years) which do not exceed the greater of--

(I) the average annual quantity of electricity sold to the utility under the contract during calendar years 1994, 1995, 1996, 1997, and 1998, or

(II) the estimate of the annual electricity production set forth in the contract, or, if there is no such estimate, the greatest annual quantity of electricity sold to the utility under the contract in any of the calendar years 1996, 1997, or 1998, and

(iii) such amendment provides that energy and capacity in excess of the limitation in clause (ii) may be--

(I) sold to the utility only at prices that do not exceed avoided cost prices determined at the time of delivery, or

(II) sold to a third party subject to a mutually agreed upon advance notice to the utility.

For purposes of this subparagraph, avoided cost prices shall be determined as provided for in 18 CFR 292.304(d)(1) or any successor regulation.

(8) Refined coal production facilities.

(A) Determination of credit amount. In the case of a producer of refined coal, the credit determined under this section (without regard to this paragraph) for any taxable year shall be increased by an amount equal to $ 4.375 per ton of qualified refined coal--

(i) produced by the taxpayer at a refined coal production facility during the 10-year period beginning on the date the facility was originally placed in service, and

(ii) sold by the taxpayer--

(I) to an unrelated person, and

(II) during such 10-year period and such taxable year.

(B) Phaseout of credit. The amount of the increase determined under subparagraph (A) shall be reduced by an amount which bears the same ratio to the amount of the increase (determined without regard to this subparagraph) as--

(i) the amount by which the reference price of fuel used as a feedstock (within the meaning of subsection (c)(7)(A)) for the calendar year in which the sale occurs exceeds an amount equal to 1.7 multiplied by the reference price for such fuel in 2002, bears to

(ii) $ 8.75.

(C) Application of rules. Rules similar to the rules of the subsection (b)(3) and paragraphs (1) through (5) of this subsection shall apply for purposes of determining the amount of any increase under this paragraph.

(9) Coordination with credit for producing fuel from a nonconventional source.

(A) In general. The term "qualified facility" shall not include any facility which produces electricity from gas derived from the biodegradation of municipal solid waste if such biodegradation occurred in a facility (within the meaning of section 45K [26 USCS § 45K]) the production from which is allowed as a credit under section 45K [26 USCS § 45K] for the taxable year or any prior taxable year.

(B) Refined coal facilities. The term "refined coal production facility" shall not include any facility the production from which is allowed as a credit under section 45K [26 USCS § 45K] for the taxable year or any prior taxable year (or under section 29 [former 26 USCS § 29], as in effect on the day before the date of enactment of the Energy Tax Incentives Act of 2005 [enacted Aug. 8, 2005], for any prior taxable year).

(10) Indian coal production facilities.

(A) Determination of credit amount. In the case of a producer of Indian coal, the credit determined under this section (without regard to this paragraph) for any taxable year shall be increased by an amount equal to the applicable dollar amount per ton of Indian coal--

(i) produced by the taxpayer at an Indian coal production facility during the 7-year period beginning on January 1, 2006, and

(ii) sold by the taxpayer--

(I) to an unrelated person, and

(II) during such 7-year period and such taxable year.

(B) Applicable dollar amount.

(i) In general. The term "applicable dollar amount" for any taxable year beginning in a calendar year means--

(I) $ 1.50 in the case of calendar years 2006 through 2009, and

(II) $ 2.00 in the case of calendar years beginning after 2009.

(ii) Inflation adjustment. In the case of any calendar year after 2006, each of the dollar amounts under clause (i) shall be equal to the product of such dollar amount and the inflation adjustment factor determined under paragraph (2)(B) for the calendar year, except that such paragraph shall be applied by substituting "2005" for "1992".

(C) Application of rules. Rules similar to the rules of the subsection (b)(3) and paragraphs (1), (3), (4), and (5) of this subsection shall apply for purposes of determining the amount of any increase under this paragraph.

(D) Treatment as specified credit. The increase in the credit determined under subsection (a) by reason of this paragraph with respect to any facility shall be treated as a specified credit for purposes of section 38(c)(4)(A) [26 USCS § 38(c)(4)(A)] during the 4-year period beginning on the later of January 1, 2006, or the date on which such facility is placed in service by the

taxpayer.

(11) Allocation of credit to patrons of agricultural cooperative.

(A) Election to allocate.

(i) In general. In the case of an eligible cooperative organization, any portion of the credit determined under subsection (a) for the taxable year may, at the election of the organization, be apportioned among patrons of the organization on the basis of the amount of business done by the patrons during the taxable year.

(ii) Form and effect of election. An election under clause (i) for any taxable year shall be made on a timely filed return for such year. Such election, once made, shall be irrevocable for such taxable year. Such election shall not take effect unless the organization designates the apportionment as such in a written notice mailed to its patrons during the payment period described in section 1382(d) [26 USCS § 1382(d)].

(B) Treatment of organizations and patrons. The amount of the credit apportioned to any patrons under subparagraph (A)--

(i) shall not be included in the amount determined under subsection (a) with respect to the organization for the taxable year, and

(ii) shall be included in the amount determined under subsection (a) for the first taxable year of each patron ending on or after the last day of the payment period (as defined in section 1382(d) [26 USCS § 1382(d)]) for the taxable year of the organization or, if earlier, for the taxable year of each patron ending on or after the date on which the patron receives notice from the cooperative of the apportionment.

(C) Special rules for decrease in credits for taxable year. If the amount of the credit of a cooperative organization determined under subsection (a) for a taxable year is less than the amount of such credit shown on the return of the cooperative organization for such year, an amount equal to the excess of--

(i) such reduction, over

(ii) the amount not apportioned to such patrons under subparagraph (A) for the taxable year,

shall be treated as an increase in tax imposed by this chapter [26 USCS §§ 1 et seq.] on the organization. Such increase shall not be treated as tax imposed by this chapter [26 USCS §§ 1 et seq.] for purposes of determining the amount of any credit under this chapter [26 USCS §§ 1 et seq.].

(D) Eligible cooperative defined. For purposes of this section the term "eligible cooperative" means a cooperative organization described in section 1381(a) [26 USCS § 1381(a)] which is owned more than 50 percent by agricultural producers or by entities owned by agricultural producers. For this purpose an entity owned by an agricultural producer is one that is more than 50 percent owned by agricultural producers.