



Project 100 – Wood Biomass Projects

Organics Subcommittee

October 23, 2007



The Connecticut Clean Energy Fund

- CCEF (administered by Connecticut Innovations, Inc.) was created by the Connecticut General Statutes to promote investment in and growth of renewable energy sources using funds collected from Connecticut's electricity ratepayers.
- Expenditures of the fund may include, but are not limited to, grants, loans, direct or equity investments, contracts or other actions that support renewable energy technologies such as wind, solar, fuel cells, run-of-river hydro, wave power and biomass

Project 100

Revisions to Connecticut's electric restructuring legislation requires the State's electric distribution companies to enter into minimum 10-year contracts for not less than 100* MWs of Class I renewable electric power by July 1, 2008.

** Recently increase to 150 by 2010*

Project 100 Process

Three phases:

Process	Responsible Party	Action
Phase 1	CCEF	Establish eligibility through review of project technical and financial viability. Determine cost/benefits of projects to Connecticut ratepayers. Select projects for further evaluation by Connecticut distribution companies.
Phase 2	Distribution companies: Connecticut Light & Power United Illuminating	Review project interconnection cost as well as system reliability and ratepayer impact. Negotiate Power Purchase Agreements (PPAs). File contracts with the Connecticut Department of Public Utility Control ("DPUC").
Phase 3	DPUC	Open docket to review contracts. Approve contracts that meet its requirements.

Key:

Scoring metric determined by
quantitative analysis of proposal

Evaluator subjective metric

(Points out of 100)

Evaluation Metrics:

■ Cost to Ratepayers

- *NPV Ratepayer Impact* (25.5)
- *Willingness to share upside* (REC, PTC, ITC) (4.5)

Note: Higher score means lower net ratepayer costs

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■ Benefits to Ratepayers

- CT economic development (9)
- Output or reliability @ system peak (3)
- Price suppression (3)
- Innovative use of technology (6)
- T&D Reliability in CT (4.5)
- Timing (4.5)

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■ Financial Viability

- Sound financial expectations & assumptions (3)
- Financing experience (2.25)
- Financial strength of developer (3)
- Realistic financing structure (1.5)
- *Security offering assurance of timely completion* (1.5)
- Risk (1.5)
- Equity participation (2.25)

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■ Feasibility

- Team experience (3.75)
- Permitting status (3.75)
- Public acceptance (2.5)
- Site issues (2.5)
- Reasonableness of schedule (1.25)
- Design status (2.5)
- Technology risk (2.5)
- Interconnection analysis (2.5)
- Quality of operating plan (1.25)
- Quality of resource/fuel plan (2.5)

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Evaluation Process: Evaluation Committee

	Affiliation	Core Expertise
Dale Hedman	Director Project Development, CCEF	Project Development
Dr. Mike Binder	Mike Binder & Assoc., Inc. Fuel Cell Consulting Services	Fuel Cells
Thomas Miles	T.R. Miles Technical Consultants Inc.	Biomass
David Nickerson	Mystic River Energy Group LLC	Project Development / Wholesale Power Supply

Evaluation Process: Steering Committee

	Affiliation	Core Expertise
Marie O'Brien	CDA	Business Development
Jerome Peters	CCEF Advisory Committee	Renewable Finance
Christopher James	DEP	Air Emissions
John Mengacci	CCEF Advisory Committee	State Energy Policy
Nancy Selman	Energy & Environmental Ventures	Energy and Finance
John Olsen	CCEF Advisory Committee	Labor
Marian Chertow*	Yale University	Industrial Ecology

*Absent from the March 20, 2007 Steering Committee Meeting

Plainfield Renewable Energy

- Location:
 - Plainfield, CT (outside SWCT)
 - Remediated Superfund site
- Description:
 - Biomass gasification (Fluidized Bed – staged combustion above bed)
 - Fuel: Silviculture and clean construction and demolition wood
 - 30 MW
- Team Experience:
 - Plainfield Renewable Energy – A joint venture between Decker Energy LLC and NuPower LLC
 - Decker Energy – Founded in 1982 has been involved in 14 diverse power projects, with approximate capacity of 1,000MW and capital costs of nearly \$700 MM. Six of these projects are renewable biomass facilities
 - NuPower LLC – CT based company with extensive experience in CT renewable energy markets
- Project Status:
 - Interconnection – Application submitted to ISO-NE and interconnection studies are nearly complete
 - Permit applications – Numerous applications are filed, draft air permit received
 - Site control established: Exclusive option to purchase site obtained
 - Design – General Arrangement drawings only
- Requested additional CCEF subsidy:
 - \$0
- Contract Term:
 - 18 years
- Rate Impact
 - NPV of total net cost impact including CCEF Funding: \$57.2 Million or **1.61¢/kWh**
- Other
 - Retained full upside of PTCs for project

Clearview - Kofkoff Egg Farm

- Location:
 - Bozrah, CT (outside SWCT)
- Description:
 - Biomass gasification (Fluidized Bed – staged combustion above bed)
 - Fuel 77% clean wood, 23% poultry manure by wt (Btu contribution: wood: 94.3%; manure: 5.7%)
 - 29.5 MW
- Team Experience:
 - Clearview Power, LLC – 35 years of project experience and over 800 MW of generating equipment in portfolio
 - TRC Environmental – Leader in environmental permitting, engineering and compliance services, with annual revenue of over \$300 Million
 - CH2M Hill – Privately held engineering and construction firm, with annual revenues of \$3 Billion, and over 15,000 salaried professionals.
 - EPI – 30 years experience in fluidized bed technology, considered a biomass to energy leader
 - Kofkoff Farms – A subsidiary of Land O’ Lakes, the farm produces chicken eggs and employs approx. 300 in New London county
- Project Status:
 - Interconnection – Preliminary analysis completed with BL&P/Groton Utilities. No ISO-NE filings
 - Permit applications – Working drafts, Siting Council petition filed
 - Site control established- Signed Option agreement
 - Design – Preliminary engineering completed
- Requested CCEF subsidy:
 - \$4,000,000
- Contract Term:
 - 20 years
- Rate Impact:
 - NPV of total net cost impact including CCEF Funding: \$44.4 Million or **0.93¢/kWh**
- Other:
 - Retained full upside of PTCs for project

GDI/Tamarack Biomass

- Location:
 - Watertown, CT (Secondary SWCT)
- Description:
 - Biomass (clean wood chips)
 - Fluidized bed boiler/steam turbine
 - 30 MW (15 MW RD2, 15MW awarded RD1)
- Team Experience:
 - Gemma Development - >850 MW of power projects
 - Gemma Power Systems – Constructed over 10,000 MW in 33 projects including wood-fuel and waste recovery
 - Tamarack – Conceptual design, site selection, permitting, construction management for 15+ power projects
- Project Status:
 - Interconnection - Application filed with ISO-NE and CL&P. Feasibility and Impact study begun.
 - Permit applications pending selection of project
 - Site control established - Purchase option agreement on land executed
 - Design – Preliminary design/selection begun
- Requested additional CCEF subsidy:
 - \$0
- Contract offer:
 - 15 years
- Rate Impact:
 - NPV of total net cost impact including CCEF Funding: \$8.0 Million or **0.44¢/kWh**
- Other:
 - Retained full upside of PTCs for project

Questions
