Financing
Renewable Energy
Project Fundamentals
Introduction by Charlie Rhuda and Jim Duffy
Renewable Energy Markets
Current State of Affairs

Stephen Tracy
Novogradac & Company LLP, 415-356-8010,
stephen.tracy@novoco.com
ARRA
Current State of Affairs

• Debt and equity markets thawing? Stimulus working?
• 4th quarter of 2009 when deal flow starts to return?
• Grant program working as planned?
• DOE loan guarantee program working as planned?
• Utility scale transaction headlines - PR or reality?
Current State of Affairs

- Panel prices continue to drop
- Consolidation to continue?
  - Fotowatio acquisition of MMA Renewable Ventures
  - Recurrent Energy acquisition of UPC Solar pipeline
  - First Solar acquisition of OptiSolar
Current State of Affairs

- Vertical Integration: the key to competing?
- Public Utilities – Friend or Foe?
- Feed-In Tariff legislation
- Cap and Trade Legislation
- State subsidy programs
Global new investment in clean energy
Q1 2004 - Q2 2009 ($bn)
NEX vs. AMEX Oil, NASDAQ and S&P 500
Q1 2003 – Q2 2009
Global public markets new investment in clean energy: Q1 2004 – Q2 2009 ($bn)
Global VC and PE new investment in clean energy: Q1 2004 – Q2 2009 ($bn)
Global asset financing for new build clean energy assets: Q1 2004 – Q2 2009 ($bn)
## Top public market transaction of the quarter
### Q2 2009

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Country</th>
<th>Stock Exchange</th>
<th>Sector</th>
<th>Type of transaction</th>
<th>New equity raised</th>
<th>Total offering size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vestas Wind Systems</td>
<td>Denmark</td>
<td>Copenhagen Stock Exchange (CSE)</td>
<td>Wind</td>
<td>Secondary</td>
<td>$1,054m</td>
<td>$1,054m</td>
</tr>
<tr>
<td>REC Group</td>
<td>Norway</td>
<td>Oslo Stock Exchange (Oslo Bors)</td>
<td>Solar</td>
<td>Secondary</td>
<td>-</td>
<td>$718.8m</td>
</tr>
<tr>
<td>Gamesa</td>
<td>Spain</td>
<td>Madrid Stock Exchange (BME)</td>
<td>Wind</td>
<td>Secondary</td>
<td>-</td>
<td>$556m</td>
</tr>
<tr>
<td>Suntech Power Holdings</td>
<td>United States</td>
<td>New York Stock Exchange (NYSE)</td>
<td>Solar</td>
<td>Secondary</td>
<td>$287m</td>
<td>$287m</td>
</tr>
<tr>
<td>Yingli Green Energy Holding</td>
<td>United States</td>
<td>New York Stock Exchange (NYSE)</td>
<td>Solar</td>
<td>Secondary</td>
<td>$202.8m</td>
<td>$241.8m</td>
</tr>
</tbody>
</table>
## Global VC and PE summary
### Q2 2009 ($bn)

<table>
<thead>
<tr>
<th>Stage/type of investment</th>
<th>Amount</th>
<th>No. of deals</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC Early Stage</td>
<td>$0.14bn</td>
<td>15</td>
</tr>
<tr>
<td>VC Late Stage</td>
<td>$0.42bn</td>
<td>12</td>
</tr>
<tr>
<td>Total VC</td>
<td>$0.56bn</td>
<td>27</td>
</tr>
<tr>
<td>PE Expansion Capital</td>
<td>$0.79bn</td>
<td>23</td>
</tr>
<tr>
<td>PIPE</td>
<td>$0.07bn</td>
<td>7</td>
</tr>
<tr>
<td>Total VCPE new investment in companies</td>
<td>$1.43bn</td>
<td>57</td>
</tr>
<tr>
<td>PE Buy-out</td>
<td>$0.14bn</td>
<td>6</td>
</tr>
<tr>
<td>Total VCPE for companies</td>
<td>$1.56bn</td>
<td>63</td>
</tr>
<tr>
<td>PE For Projects</td>
<td>$1.24bn</td>
<td>10</td>
</tr>
<tr>
<td>Total invested by the venture capital and private equity community</td>
<td>$2.81bn</td>
<td>73</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>Amount</th>
<th>No. of deals</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>$1.11bn</td>
<td>38</td>
</tr>
<tr>
<td>South America</td>
<td>$0.05bn</td>
<td>1</td>
</tr>
<tr>
<td>EU Europe</td>
<td>$0.17bn</td>
<td>9</td>
</tr>
<tr>
<td>Non-EU Europe</td>
<td>$0.00bn</td>
<td>1</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
<td>$0.02bn</td>
<td>3</td>
</tr>
<tr>
<td>ASOC</td>
<td>$0.08bn</td>
<td>5</td>
</tr>
<tr>
<td>Total VCPE new investment in companies</td>
<td>$1.43bn</td>
<td>57</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sector</th>
<th>Amount</th>
<th>No. of deals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>$0.31bn</td>
<td>16</td>
</tr>
<tr>
<td>Solar</td>
<td>$0.24bn</td>
<td>11</td>
</tr>
<tr>
<td>Power storage &amp; fuel cells</td>
<td>$0.24bn</td>
<td>9</td>
</tr>
<tr>
<td>Biofuels</td>
<td>$0.23bn</td>
<td>7</td>
</tr>
<tr>
<td>Biomass &amp; waste</td>
<td>$0.20bn</td>
<td>6</td>
</tr>
<tr>
<td>Wind</td>
<td>$0.15bn</td>
<td>6</td>
</tr>
<tr>
<td>CCS</td>
<td>$0.06bn</td>
<td>1</td>
</tr>
<tr>
<td>Marine &amp; small hydro</td>
<td>$0.00bn</td>
<td>1</td>
</tr>
<tr>
<td>Total VCPE new investment in companies</td>
<td>$1.43bn</td>
<td>57</td>
</tr>
</tbody>
</table>
Global asset finance summary
Q2 2009 ($bn)

<table>
<thead>
<tr>
<th>Type of investment</th>
<th>Amount</th>
<th>No. of deals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total new build asset financing</td>
<td>$20.5bn</td>
<td>124</td>
</tr>
<tr>
<td>Refinancing</td>
<td>$4.8bn</td>
<td>13</td>
</tr>
<tr>
<td>Acquisition</td>
<td>$7.6bn</td>
<td>46</td>
</tr>
<tr>
<td>Total refinancing &amp; acquisitions</td>
<td>$12.4bn</td>
<td>59</td>
</tr>
<tr>
<td>Total asset financing</td>
<td>$32.9bn</td>
<td>183</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>Amount</th>
<th>No. of deals</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>$2.7bn</td>
<td>20</td>
</tr>
<tr>
<td>South America</td>
<td>$1.7bn</td>
<td>13</td>
</tr>
<tr>
<td>EU Europe</td>
<td>$13.8bn</td>
<td>58</td>
</tr>
<tr>
<td>Non-EU Europe</td>
<td>$0.1bn</td>
<td>2</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
<td>$0.5bn</td>
<td>3</td>
</tr>
<tr>
<td>China</td>
<td>$0.9bn</td>
<td>12</td>
</tr>
<tr>
<td>India</td>
<td>$0.5bn</td>
<td>11</td>
</tr>
<tr>
<td>Rest of ASOC</td>
<td>$0.4bn</td>
<td>5</td>
</tr>
<tr>
<td>Total new build asset financing</td>
<td>$20.5bn</td>
<td>124</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sector</th>
<th>Amount</th>
<th>No. of deals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind</td>
<td>$9.7bn</td>
<td>40</td>
</tr>
<tr>
<td>Solar</td>
<td>$4.4bn</td>
<td>44</td>
</tr>
<tr>
<td>Biomass</td>
<td>$3.5bn</td>
<td>18</td>
</tr>
<tr>
<td>Biofuels</td>
<td>$2.4bn</td>
<td>12</td>
</tr>
<tr>
<td>Small Hydro</td>
<td>$0.4bn</td>
<td>8</td>
</tr>
<tr>
<td>Geothermal</td>
<td>$0.2bn</td>
<td>1</td>
</tr>
<tr>
<td>Marine</td>
<td>$0.0bn</td>
<td>1</td>
</tr>
<tr>
<td>Total new build asset financing</td>
<td>$20.5bn</td>
<td>124</td>
</tr>
</tbody>
</table>
Components of a Financeable Renewable Energy Project

Rich Cogen
Nixon Peabody LLP
518-427-2665
rcogen@nixonpeabody.com

Stephen B. Tracy
Novogradac & Company LLP
415-356-8010
stephen.tracy@novoco.com
Components of a Financeable Renewable Energy Project

• Physical – can the planned project be built and operated?
• Paper – are permits and contracts in place that assure that the project can be built and operated as planned, and that properly allocate key risks?
• $ - is the project financially feasible if built and operated as planned under the contracts in place?
• Is the project financeable under current market conditions
Components of a Financeable Renewable Energy Project

THE PHYSICAL PROJECT

- Land for facility and interconnections (wind and utility scale solar)
- Permits – federal, state and local
- Constructability given land rights and permits?
- Grid interconnection (as applicable)
- Fuel supply (wind resource? solar resource? LFG supply? Biomass supply?)
Components of a Financeable Renewable Energy Project

PHYSICAL PROJECT (cont’d)
Example: 88 MW Wind Project

- 53 1.65 MW Wind Turbines
- 5040 acres of leased land – 92 parcels
- 15 miles of access roads
- 21 miles of collection cables (underground)
- Switchyard
- 1 mile of 115 kV transmission interconnecting line
- Point of interconnection substation
- O&M Facility: 8,000 SF; five acres
- 3 Permanent Meteorological Towers
PHYSICAL PROJECT (cont’d)
Development Cycle - Wind Energy

- Site Screening
  - Wind, power, environmental
- Land Acquisition
  - Options/Land Leases
- Wind Resource Studies
  - Two years is the preferred minimum
- Environmental Studies
  - Desktop, Field Studies
  - Some require multiple seasons
- Permitting
- Interconnection Process
- Equipment Procurement/Delivery
- Construction Financing
- Construction
- Tax Equity Financing
- Operations

Timeline:
- 0
- 6
- 12
- 18
- 24
- 30
- 36
- 42

- May Continue
- Monitoring
Components of a Financeable Renewable Energy Project

PHYSICAL PROJECT (cont’d)
Solar Distributed Generation

• Access to Rooftop /Adjacent Land
• Construction logistics
• Solar Panels and mounts
• Inverters – conversion from DC power to AC power
• Meters
• Electrical connection to host
• Grid Interconnection
Components of a Financeable Renewable Energy Project

DEVELOPMENT CYCLE - Solar

- Find the Host / Sell the Host
- Negotiate the PPA w/ the Host
  - Make sure you’re deal is financeable
- Handle all permitting issues
- Negotiate the EPC Contract
  - Procure the solar panels
- Execute the installation
  - Obtain the PTO Letter
- Operate and maintain the facility per the O&M Agreement
Financing Renewable Energy Project Fundamentals
Financing Renewable Energy Project Fundamentals
Components of a Financeable Renewable Energy Project

PAPER – all the paper!

- Ground Leases/Easements
- Equipment Supply Contract
- Construction Contract/EPC Contract
- O&M Agreement
- Fuel Supply Agreement
- Interconnection Agreement
- Offtake agreements – PPA, Lease, Hedge
- REC sales
Components of a Financeable Renewable Energy Project

EQUIPMENT SUPPLY / CONSTRUCTION / EPC CONTRACTS

- Facility completion
- Schedule
- Price certainty/payment procedures
- Change orders
- Performance warranties – build to approved specs, output, efficiency, permit compliance
Components of a Financeable Renewable Energy Project

EQUIPMENT SUPPLY / CONSTRUCTION / EPC CONTRACTS (cont’d)

- Performance test/acceptance
- Remedies/liquidated damages ("LDs")
  - Schedule
  - Performance
- Performance security
- If not an EPC approach, the separate agreements need to be carefully coordinated
Components of a Financeable Renewable Energy Project

**O&M AGREEMENTS**

- Price
- Term
- Performance Guarantees – availability, output, efficiency, level of degradation of performance, maintenance schedules
- Remedies/LDs
- Performance security
Components of a Financeable Renewable Energy Project

FUEL SUPPLY AGREEMENT

- Not needed for wind or solar, but important for biomass
- Fuel supply commitment – amount, firmness, quality
- Term
- Remedies/LDs
- Performance security
Components of a Financeable Renewable Energy Project

INTERCONNECTION AGREEMENT

- Federally regulated – through FERC approved tariffs and adaptations of standard forms
- Rights to interconnect
- Design/construction
- Schedule
- Cost
Components of a Financeable Renewable Energy Project

OFFTAKE AGREEMENTS

- PPA/Lease:
  - Products covered – energy only? Capacity, too?
  - Delivery point
  - Price
  - Term
  - Performance security
  - Remedies/LDs

- Hedge – price certainty; cost; term; performance security
Components of a Financeable Renewable Energy Project

FINANCIAL FEASIBILITY – Issues for Independent Engineer

- Are there sufficient $ to build and complete the project?
- Can it be built in compliance with permits?
- If built in accordance with agreements and permits, are performance guarantees realistic?
- Are electricity production estimates realistic?
Components of a Financeable Renewable Energy Project

FINANCIAL FEASIBILITY/IE (cont’d)

- Are operating budgets reasonable?
- Are O&M guarantees realistic based on operating experience of the equipment?
- Track record of the primary equipment
- Can facility be expected to last for life of financing?
- Identification of principal risks that could result in less favorable results
Components of a Financeable Renewable Energy Project

FINANCIAL FEASIBILITY – Financial Model

- Given the fuel supply (or wind or solar resource) and offtake arrangement, if built and operated under the contracts and permits, will the project generate sufficient revenues to pay O&M costs, cover debt service at required ratios, and provide desired return on equity
- Tax equity investor requirements
- State subsidies/incentives
PTCs ETCs & Grants

Jim Duffy
Nixon Peabody LLP
617-345-1129
jduffy@nixonpeabody.com

Tony Grappone
Novogradac & Company LLP
617-330-1920, x. 114
tony.grappone@novoco.com
PTCs ETCs & Grants

THE PRODUCTION TAX CREDIT

- The PTC is provided under Section 45 of the Internal Revenue Code and until recently has been the principal federal incentive for wind and certain other types of renewable energy project development and the primary motivation for the tax credit equity investments in these projects
- The following is a brief summary of the PTC, together with interpretations thereof, as modified to date by ARRA and other recent developments
PTCs are available with respect to electricity produced from “qualified energy resources”:  
- Wind;  
- Closed-loop biomass;  
- Open-loop biomass;  
- Geothermal  
- Solar (but only if placed in service prior to 1/1/06);  
- Small irrigation power;  
- Municipal solid waste;  
- Qualified hydropower production; and  
- Marine and hydrokinetic renewable energy.
Closed-Loop and Open-Loop Biomass

- Wind is pretty self-explanatory, but the biomass terms may need a bit of explanation.

- Closed-loop biomass is defined in Section 45(c)(2) of the IRC as being derived from any organic material from a plant which is planted exclusively for purposes of being used at a qualifying facility to produce electricity.

- Open-loop biomass includes other organic wastes, including agricultural and wood waste products and animal wastes.
• Like other Federal tax credits, the PTC is a dollar-for-dollar reduction in Federal income tax liability

• Under current law (after extensions in October 2008 and again in ARRA in February 2009), a wind facility must have been placed in service prior to January 1, 2013 and facilities generating electricity from eligible sources other than wind must have been placed in service prior to January 1, 2014 in order to be eligible for PTCs.
The PTC is currently (for the year 2009) 2.1 cents per kilowatt hour of electricity produced by the taxpayer and sold to an unrelated person, for a 10-year period beginning on the date the wind facility was originally placed in service.

So, the amount of the PTC depends upon the amount of electricity generated.
The price referenced is reduced by 50% for certain types of generation, including open-loop biomass, small irrigation power, landfill gas, trash combustion and qualified hydropower (so, 2.1 cents for 2009 becomes 1.1 cents when rounded to the nearest 0.1 cent)
PTCs ETCs & Grants

THE PRODUCTION TAX CREDIT – Ownership Structures

• The “Produced by the Taxpayer” requirement means that the owner of the energy project receives the PTCs (provided, however, that if the owner of a biomass facility is not the producer of the electricity, the lessee or operator of such facility would be eligible for those PTCs)

• So, you can’t just sell PTCs or, generally, pass through PTCs by utilizing a leasing structure; you generally have to make the investor claiming the PTCs an owner of the facility
Why bring in a tax equity investor?

Most wind project developers either: (i) do not anticipate having Federal income tax liability for the next 10 years such that they will be able to take advantage of the PTCs themselves, or (ii) need to monetize the PTCs up front in order to help pay for the costs of developing their wind facility.
The way to structure a transaction so that there is more than one owner for tax purposes is generally to use a limited partnership or a limited liability company.

For tax purposes, a partnership (which includes a limited liability company) is not recognized as an entity, so that the partners are treated as owners as to their allocable interests in the partnership.
PTCs ETCs & Grants

SECTION 48 TAX CREDITS

- Available, generally, for “energy property”, which for these purposes is equipment which uses:
  - solar energy to generate electricity,
  - solar energy to heat or cool (or provide hot water for use in) a structure,
Available, generally, for “energy property”, which for these purposes is equipment which uses (cont’d):

- solar energy to provide solar process heat, or
- solar energy to illuminate the inside of a structure using fiber-optic distributed sunlight.

Note, however, that energy property which is used to generate energy for the purposes of heating a swimming pool is not eligible for these tax credits.
There are also other types of property which can claim Section 48 energy tax credits (such as qualified fuel cells and qualified microturbines), but they are beyond the scope of this introductory presentation.

And, of course, there are the facilities eligible for the PTC who have switched over to the ITC.
THE ITC (cont’d)

- The ITC for eligible facilities is generally 30% of the qualifying eligible cost of the facility.
- Accordingly, the amount of the ITC is based upon the cost of the facility, not upon the amount of energy produced.
PTCs ETCs & Grants

THE ITC (cont’d)

• The ITC is claimed in full when the facility is placed in service and in daily operation (subject to certain “progress expenditure” exceptions)

• Certain costs do not go into the 30% basis calculation: e.g., operating reserves, transmission lines, permanent loan fees

• The ITC is subject to recapture over a 5-year period, vesting 20% per year
Unlike the situation with the PTC, there is no requirement that electricity be sold to an unrelated person in order to receive the ITC.

When claiming the ITC it is easier to use a facility “behind the meter” or for “distributed generation” without having to come up with a third party sale of the electricity.
The ITC reduces the basis available for depreciation by 50% of the ITC claimed. Since the ITC is generally a 30% tax credit, a basis reduction of 50% of the 30% ITC is 15%, meaning that you only get to depreciate 85% of the otherwise available depreciable basis. There is no basis reduction when claiming the PTC, so when claiming the PTC you depreciate 100% of the calculated depreciable basis.
PTCs ETCs & Grants

THE ITC (cont’d)

- Leasing structures can be used to pass through the ITC; this opens up additional transaction structures, such as sale-leasebacks and pass-through or inverted leases which cannot be utilized (other than for certain biomass) when claiming the PTC

- The ITC, unlike the PTC, is not reduced due to the presence of tax exempt bond financing or other “subsidized energy financing”
PTCs ETCs & Grants

THE ITC (cont’d)

• The entire amount of the ITC can be used to offset Alternative Minimum Tax

• For the PTC, only during the first four years of the ten-year tax credit period can the PTC be used to offset Alternative Minimum Tax
THE ITC - RECENT EXTENSION

- Last fall, the Emergency Economic Stabilization Act of 2008 (popularly known as the “EESA” or the “Bailout Legislation”) extended the solar ITCs for 8 years, so that a qualifying facility must be placed in service prior to January 1, 2017, or ITCs are reduced from 30% to 10% for most solar property and eliminated for fiber-optic illumination
  - The relevant expiration date had been January 1, 2009 until the extension in October 2008
PTCs ETCs & Grants

THE ITC – CREDIT OR CASH GRANT

- ARRA also included a short-term election to opt from the ITC (even if eligible for the ITC by electing a switch from the PTC) to a dollar-for-dollar Treasury cash grant payment in lieu of the ITC.

- These Treasury cash grants are available only for facilities which are placed in service in 2009 or 2010 or as to which construction is commenced in 2009 or 2010.
PTECs ETCs & Grants

THE ITC - CASH GRANTS

- The cash grants monetize the ITC on a dollar-for-dollar basis, but do not monetize the depreciation.

- The depreciable basis of the facility is reduced by 50% of the cash grant received (so the effect on depreciation is the same as if the ITC had been claimed).
These grants cannot be made to Federal, state or local governments (or any political subdivision, agency or instrumentality thereof), to any organization described in Section 501(c) of the Code and exempt from tax under Section 501(a) of the Code, or any partnership or other pass-through entity any partner or equity or profits holder of which is such a government or tax-exempt entity.
State and Local Subsidies

Tony Grappone
Novogradac & Company LLP
617-330-1920, x. 114
tony.grappone@novoco.com

Ruth Silman
Nixon Peabody LLP
617-345-6062
rsilman@nixonpeabody.com
Renewable Portfolio Standards

www.dsireusa.org

- WA: 15% by 2020*
- CA: 20% by 2010
- AZ: 15% by 2025
- NV: 25% by 2025*
- OR: 25% by 2025 (large utilities)*
- 5% - 10% by 2025 (smaller utilities)
- CO: 20% by 2020 (IOUs)
  10% by 2020 (co-ops & large munis)*
- NM: 20% by 2020 (IOUs)
  10% by 2020 (co-ops)
- NM (IOUs): 20% by 2025 (co-ops & munis)
- MT: 15% by 2015
- D: 10% by 2015
- SD: 10% by 2015
- IA: 105 MW
- KS: 20% by 2020
- MO: 15% by 2021
- IL: 25% by 2025
- OH: 25% by 2025†
- MO: 15% by 2021
- NC: 12.5% by 2021 (IOUs)
  10% by 2018 (co-ops & munis)
- VA: 15% by 2025*
- MN: 25% by 2025
  (Xcel: 30% by 2020)
- WI: Varies by utility; 10% by 2015 goal
- MI: 10% + 1,100 MW by 2015*
- WI: (1) RE meets any increase in retail sales by 2012;
  (2) 20% RE & CHP
- MI: 10% + 1,100 MW by 2015*
- NY: 24% by 2013
- NH: 23.8% by 2025
- MA: 15% by 2020
  + 1% annual increase (Class I Renewables)
- ME: 30% by 2000
  New RE: 10% by 2017
- RI: 16% by 2020
- CT: 23% by 2020
- PA: 18% by 2020†
- NJ: 22.5% by 2021
- MD: 20% by 2022
- DE: 20% by 2019*
- DC: 20% by 2020
- HI: 40% by 2030
- TX: 5,880 MW by 2015
- KS: 20% by 2020
- OH: 25% by 2025†
- MO: 15% by 2021
- NC: 12.5% by 2021 (IOUs)
  10% by 2018 (co-ops & munis)
- VA: 15% by 2025*
- MN: 25% by 2025
  (Xcel: 30% by 2020)
- WI: Varies by utility; 10% by 2015 goal
- MI: 10% + 1,100 MW by 2015*
- NY: 24% by 2013
- NH: 23.8% by 2025
- MA: 15% by 2020
  + 1% annual increase (Class I Renewables)
- ME: 30% by 2000
  New RE: 10% by 2017
- RI: 16% by 2020
- CT: 23% by 2020
- PA: 18% by 2020†
- NJ: 22.5% by 2021
- MD: 20% by 2022
- DE: 20% by 2019*
- DC: 20% by 2020
- HI: 40% by 2030
- TX: 5,880 MW by 2015

29 states & DC have an RPS
State & Local Subsidies

- State and local subsidies vary widely
- **Renewable Portfolio Standards** (RPS) usually have a significant impact on each state’s program – Most states have them however no two are alike.
  - 1 – Cash rebates for a portion of the system cost
    - Can be based on a set formula or a negotiated amount
    - Usually funded after the project has been placed in service and upon receipt of certain key documents
    - Taxable for federal and state purposes
State & Local Subsidies

2 – Cash rebates based on the amount of energy produced
   • Commonly referred to as a Production Based Incentive or PBI
   • Some states or utilities provide more or less incentive depending on the use (i.e. California’s MASH program for affordable housing)

3 – State Tax credits to be used against state income tax
   • Need to have an investor with taxable income in that state so number of investors is limited
State & Local Subsidies

4 – Solar Renewable Energy Certificate (SREC)
  • Vary depending on utility/state
  • Often times can negotiate the term of contract or as an upfront payment
  • Depends on market for RECs

5 – Feed-in tariff
  • Not common in the U.S. however some communities have emerged

6 – A combination of subsidies
  • Some states offer a mix of rebates
State & Local Subsidies

Massachusetts program is administered by the Massachusetts Technology Collaborative Renewable Energy Trust (MTC)

- **Green Communities Act** enacted in 2008 to accelerate green energy generation/consumption. Includes Wind, Solar, Biomass, Hydroelectric, Landfill gas and fuel cells

- **Commonwealth Wind** lists the specific subsidies available for wind projects
  - Micro wind
  - Community-Scale wind
  - Commercial wind
State & Local Subsidies

Commonwealth Solar lists the specific subsidies available for solar projects:

- $68 Million in dedicated funds
- Goal of 22 MW by 2012 and 250 by 2017
- Rebates for commercial projects are limited to systems of 500KW
- Rebates for residential projects limited to 5KW
- The Green Affordable Housing initiative program provides for earmarks within affordable housing
- Rebate based on a stepped calculation
- REC sales through GreenSmart program
State & Local Subsidies

Massachusetts Hydropower Initiative

- $1.2M available for current round
- Up to $600,000 per project not to exceed 50% of project costs.
- Projects must produce at least 200kWh per year

Other subsidies / benefits available in Mass

- Net metering
- State income tax deductions and credits
- Tax exemptions for both property and sales
Break / Introductions
Debt Sources

Deborah DeMasi, Partner
Nixon Peabody LLP
202-585-8194
ddemasi@nixonpeabody.com
Debt Sources

- Who is lending? What options are available??
  - Existing lending relationships
  - Industry specialists

Construction loans:
  - Rates,
  - Closing costs,
  - Terms,
  - Guarantees,
  - How repaid and from what sources
Debt Sources

• **Permanent Debt**
  – Rates
  – Closing costs
  – Terms
  – Debt service coverage ratios
  – Collateral (corporate or personal guarantees)
    • Recourse vs. non recourse classification

• **Developer fee note**
  – Can it be repaid?
  – Is it owed to a cash basis related party?
Debt Sources

FEDERAL CREDIT SUPPORT

• DOE Loan Guarantees
• USDA Loans, Loan Guarantees and Grants
Debt Sources

DOE LOAN GUARANTEES

- Existing Innovative Technologies Guarantee Solicitation
- Renewable Energy Guarantee Solicitation (Expected Soon)
- Amendment to Loan Guarantee Regulations
Debt Sources:

INNOVATIVE TECHNOLOGIES SOLICITATION
- KEY REQUIREMENTS
Debt Sources

INNOVATIVE TECHNOLOGIES SOLICITATION - KEY REQUIREMENTS

• Up to $8.5 Billion in Loan Guarantees
• Funds Will Be Awarded to Projects that Employ Innovative Energy Efficiency, Renewable Energy and Advanced Transmission and Technologies
INNOVATIVE TECHNOLOGIES SOLICITATION - KEY REQUIREMENTS

Eligibility

1. Eligible Project:
   • Avoids, reduces or sequesters air pollutants or green house gas emissions, and
   • Uses “New or Significantly Improved Technology”

2. Must be:
   • A Renewable Energy Systems Project,
   • A Electric Power Transmission Project, or
   • A Leading Edge Biofuel Project
Debt Sources

INNOVATIVE TECHNOLOGIES SOLICITATION - KEY REQUIREMENTS

Section 1705 Eligibility Criteria

• Reasonably likely to commence construction on or before September 30, 2011

• Create or retain jobs in the United States

• Meet all Energy Policy Act requirements and corresponding regulations

• Meet all applicable Recovery Act requirements
Debt Sources

INNOVATIVE TECHNOLOGIES SOLICITATION - KEY REQUIREMENTS

Nine Categories for “New or Significantly Approved” Technologies

- Alternative Fuel Vehicles
- Biomass
- Efficient Electricity Transmission, Distribution, and Storage
- Energy Efficiency Building Technologies and Applications
- Geothermal
- Hydrogen and Fuel Cell Technologies
- Energy Efficient Projects
- Solar
- Wind and Hydropower
Debt Sources

INNOVATIVE TECHNOLOGIES SOLICITATION - KEY REQUIREMENTS

Promoting Manufacturing Projects

• Energy Efficient Industrial and Building
• Hybrid Vehicle and Plug-In
• Advanced Wind Turbine
• Ocean Wave, Tidal and River
• Utility-Scale Energy Storage
• Battery
Debt Sources

INNOVATIVE TECHNOLOGIES SOLICITATION - KEY REQUIREMENTS

Promoting Manufacturing Projects (cont’d)

- Hydrogen and Fuel Cell
- Low-cost Carbon Fiber
- Solar
- High-temperature Geothermal Pump
- Advanced Geothermal Power Cycle
- Substation-Class Transformer
- Energy Efficient, High-Capacity Transmission Cable
Debt Sources

INNOVATIVE TECHNOLOGIES SOLICITATION - KEY REQUIREMENTS

Promoting Manufacturing Projects (cont’d)

• High-Power, High-Voltage Power Electronics
• Advanced Design Biorefineries
• Geothermal Resource Areas
• Large-Scale Concentrated Solar
• Tidal and Wave Energy and Advanced Hydropower
• Offshore Wind
INNOVATIVE TECHNOLOGIES SOLICITATION - KEY REQUIREMENTS

Debt Sources

Financing

Major Change for this Solicitation: In addition to classic limited recourse project finance model, DOE will consider corporate financing for innovative projects.
Debt Sources

INNOVATIVE TECHNOLOGIES SOLICITATION - KEY REQUIREMENTS

DOE Pricing Goals and Objectives

“Greatest Impact” Objectives:

- Avoiding pollutants or emissions
- Reducing reliance on insecure resources of energy
- Reducing infrastructure vulnerabilities
- Fastest time to project completion
- Extent to which the project constitutes a “New or Significantly Improved Technology”
Debt Sources

INNOVATIVE TECHNOLOGIES SOLICITATION - KEY REQUIREMENTS

Credit Subsidy Fees

• If an Eligible Project cannot meet the construction deadline or fails to meet another Section 1705 requirement, the applicant may proceed with the loan guarantee process under Section 1703

• A 1705 Eligible Project would qualify for federal support for applicable “Credit Subsidy Costs”

• Applicants for a Section 1703 project would be required to pay such Credit Subsidy Costs
Debt Sources

INNOVATIVE TECHNOLOGIES SOLICITATION - KEY REQUIREMENTS

Additional Statutory/Regulatory Requirements

• Comply with Davis-Bacon labor requirements
• Certain extensive ongoing reporting requirements
• Although the Recovery Act requires application of the “Buy American” rules for the use of funds appropriated for any project, these rules should not apply to most projects unless they are governmental
• Proposed regulations clarify issues relating to DOE liens on collateral, and facilitate corporate financings
Debt Sources

INNOVATIVE TECHNOLOGIES SOLICITATION - TIMING

- Reasonably Likely to Commence Construction by September 11, 2011
- Potentially Seven Rounds of Review with a Date of October 22, 2009 for the Next Round
- Two Part Application Process with Three Months Between Each Submission
- Administrative and Technological Details are Time Consuming, So Start Application Process Now!
## INNOVATIVE TECHNOLOGIES SOLUTIONS - TIMING (continued)

<table>
<thead>
<tr>
<th>Loan Guarantee Amount</th>
<th>Application Fee Total</th>
<th>Part I Payment (25%)</th>
<th>Part II Payment (75%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0 - $150,000,000</td>
<td>$75,000</td>
<td>$18,750</td>
<td>$56,250</td>
</tr>
<tr>
<td>Above $150,000,000- $500,000,000</td>
<td>$100,000</td>
<td>$25,000</td>
<td>$75,000</td>
</tr>
<tr>
<td>Above $500,000,000</td>
<td>$125,000</td>
<td>$31,250</td>
<td>$93,750</td>
</tr>
</tbody>
</table>
Debt Sources

USDA LOANS, LOAN GUARANTIES, AND GRANTS
Debt Sources

USDA LOANS, LOAN GUARANTEES, AND GRANTS

• Overview
  – 2008 Farm Bill created new programs and increased funding
  – USDA provides rural energy loans, loan guarantees, and grants to eligible businesses
  – Projects must generally be in a rural area:
    • “Rural” is defined as a community of fewer than 50,000 people not located within a larger metropolitan area
Debt Sources

USDA LOANS, LOAN GUARANTEES, AND GRANTS

- RUS Loans for Renewable Energy Projects
  - 2008 Farm Act extended traditional RUS financing to loans for renewable energy projects, including electric generation from renewable energy resources for resale to rural and non-rural residents
  - Applicants must have entered into a power purchase or tolling agreement with an existing USDA borrower
  - Maximum loan amount: lesser of $25 million or 75% of project costs
Debt Sources

USDA LOANS, LOAN GUARANTEES, AND GRANTS

• Business and Industry Guaranteed Loan Program
  – Administered by USDA’s regional offices
  – Borrowers apply for a loan from an eligible lending institution, which applies to USDA for a loan guarantee
  – Eligible Purpose: Developing business in rural communities, including reducing the reliance on non-renewable energy resources
Debt Sources

USDA LOANS, LOAN GUARANTEES, AND GRANTS

- **Business and Industry Guaranteed Loan Program**

  - Maximum loan amount: $10 million (exceptions of up to $35 million for high priority projects)
  
  - Amount of loan guarantee depends on the size of the loan:

    - 80% loan guarantee if loan is $5 million;
    
    - 70% loan guarantee if loan is $5 million and $10 million; and
    
    - 60% loan guarantee if loan is $10 million.
Debt Sources

USDA LOANS, LOAN GUARANTEES, AND GRANTS

- Rural Energy for America Program (REAP)
  - Administered by USDA’s regional offices
  - Loan guarantees and/or grants for the purchase of renewable energy systems (e.g., wind turbines, solar energy systems, systems using or producing biomass fuels, geothermal heating and cooling, and facilities producing ethanol or biodiesel), energy efficiency improvements, energy audits, and feasibility studies
  - Eligibility for feasibility studies and regular REAP: agricultural producers and rural small businesses
  - Eligibility for energy audits and renewable energy assistance: rural electric cooperatives, public power entities, units of State, tribal, or local government, and others
• REAP (continued)
  – Grant limit: $250,000 for energy efficiency improvements or $500,000 for renewable energy systems (up to 25% of total project costs)
  – Loan guarantee limit: $25 million
  – Amount of loan guarantee depends on the size of the loan:
    • 85% loan guarantee if loan amount is \( \leq \$600,000 \);
    • 80% loan guarantee if loan amount is \( > \$600,000 \) and \( \leq \$5 \) million;
    • 70% loan guarantee if loan amount is \( > \$5 \) million and \( \leq \$10 \) million; and
    • 60% loan guarantee if loan amount is \( > \$10 \) million.
Debt Sources

USDA LOANS, LOAN GUARANTEES, AND GRANTS

• Biorefinery Assistance Program
  – Loan guarantees and grants to fund the development, construction, and retrofitting of commercial-scale biorefineries
  – Loan guarantee limit: $250 million and 80% of project costs
  – Grant limit: 30% of project costs
  – Example: Commercial-scale cellulosic (wood chip) ethanol plant for which USDA guaranteed an $80 million loan. When fully operational in 2010, the plant is expected to produce approximately 20 million gallons of cellulosic ethanol per year
Debt Sources

USDA LOANS, LOAN GUARANTEES, AND GRANTS

- **Repowering Assistance Program for Biorefineries**
  - Provides payments to rural biorefineries (in existence before July 18, 2009) that replace fossil fuels used in their heat and/or power process with renewable biomass
  - Limit: lesser of $5 million or 50% of project costs

- **Bioenergy Program for Advanced Biofuels**
  - Payments are made to eligible advanced biofuel producers for the production of fuel derived from renewable biomass, e.g.: biofuel derived from cellulose, waste material, or starch (other than ethanol derived from corn kernel starch)
  - Eligible producers enter into a contract with USDA and are paid based on quantity/duration of advanced biofuel production and the net nonrenewable energy content
Debt Sources

USDA LOANS, LOAN GUARANTEES, AND GRANTS

• **Biomass Crop Assistance Program**
  – Financial assistance to producers/entities that deliver eligible biomass material to designated biomass conversion facilities for use as heat, power, biobased products, or biofuels
  – Assistance may include payments (i) for up to 78% of cost of establishing an eligible crop; (ii) to support production; and (iii) for the collection, harvest, storage, and transportation to a biomass conversion facility

• **Other Programs**
  – Biomass Research and Development Program
  – Rural Business Enterprise Grants
  – Rural Business Opportunity Grants
Ownership Structures

Forrest Milder
Nixon Peabody LLP
617-345-1055
fmilder@nixonpeabody.com

Stephen B. Tracy
Novogradac & Company LLP
415-356-8010
stephen.tracy@novoco.com
OVERVIEW OF GOVERNMENT INCENTIVES AND FINANCING STRUCTURES

• Government Incentives
  – Accelerated Depreciation
  – Grant vs. Tax Credits
  – Government Loan Guaranty

• Current Financing Structures
  – PTC with Tax Equity
  – Grant with Project Debt
  – Grant with Project Debt and Tax Equity
  – Others
FINANCING STRUCTURE IS A FUNCTION OF INCENTIVE SELECTED

- US Treasury Grant paid in cash within 60 days of COD.
- Investment Tax Credit not paid in cash. Reduces corporate tax liability.
- Production Tax Credit not paid in cash. Reduces corporate tax liability.

- Many 2009-2011 Section 48 projects (wind/geothermal/biomass/etc) are expected to elect the Treasury Grant instead of the PTC due to state of tax and cash equity market.

<table>
<thead>
<tr>
<th>Title</th>
<th>Incentive</th>
<th>Term</th>
<th>Incentive</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treasury Grant</td>
<td>30% of Capital Costs</td>
<td>2010</td>
<td>30% of Capital Costs</td>
<td>2010</td>
</tr>
<tr>
<td>Investment Tax Credit</td>
<td>30% of Capital Costs</td>
<td>2012</td>
<td>30% of Capital Costs</td>
<td>2016</td>
</tr>
<tr>
<td>Production Tax Credit</td>
<td>$21/MWh + CPI for 10 yrs</td>
<td>2012</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Title | Incentive                        | Term       | Incentive | Term       |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind</td>
<td></td>
<td></td>
<td>Solar</td>
<td></td>
</tr>
<tr>
<td>Treasury Grant</td>
<td>30% of Capital Costs</td>
<td>2010</td>
<td>30% of Capital Costs</td>
<td>2010</td>
</tr>
<tr>
<td>Investment Tax Credit</td>
<td>30% of Capital Costs</td>
<td>2012</td>
<td>30% of Capital Costs</td>
<td>2016</td>
</tr>
<tr>
<td>Production Tax Credit</td>
<td>$21/MWh + CPI for 10 yrs</td>
<td>2012</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Basic Structures

Most Structures are Based on Three Models:

- Owner
- Owner with a partnership
- Lease
Ownership Structures

Possible Ownership Structures (part 2):

- **Sale Lease Back** – The developer sells the project to an investor. The investor then leases the project back to the developer in exchange for lease payments. There’s a 90 day “window” to do this structure.

- **Lease pass-through/Inverted lease** – an entity (Lessor) is created to own the project, and a second entity (Lessee) is created to operate it, the owner elects to pass-through the Credits to the Lessee in exchange for lease payments or capital contributions.
Owner Structures

• 99-1 relationship while there are credits
• Permanent or 5/10 year relationship
• Flip?
• Consider the wind RP 2007-65
ITC-style Partnership Flip

- Investor receives cash grant/ITC plus depreciation
- Flip occurs after investor receives IRR but not within first five years
- Developer generally has purchase option after flip
- Capital account or outside basis issues

Developer

Investor

Partnership

cash grant/ITC plus depreciation

Power Sales

Power

Purchaser

1% pre-flip
95% post-flip

99% pre-flip
5% post-flip
Traditional Sale-Leaseback

- Developer often has option to acquire property at end of lease term
- Lease must qualify as true lease for tax purposes
  - Minimum investment – 20%
  - No put right by lessor
  - No lessee investment
  - No lessee loans or guarantees
  - Lessor profit
ITC Lease Passthrough

- No basis reduction as a result of ITC/cash grant
- Investor takes half the credit/cash grant into income over five years
- Lease must qualify as true lease for tax purposes
- Lease must qualify for credit pass through election
Lease Structures

- Long Term (e.g., 20 years) Financing Lease back to user
- Lease-leaseback with a lease-pass through
  - Works for energy credits and grants
  - Not for most PTCs
  - Transfers only the credit/grant, so what about depreciation?
- Might layer partnership structures on top
Financing Renewable Energy Project Fundamentals

Partnership Flip

- **Fund General Partner**: 1%
- **Tax Credit Equity Investor**: 99%

**Investment Fund**
- Tax Credits
- Depreciation Deductions
- Cash Flow

- **Developer Fee**
- **100%**

**Solar 1, LLC**
- **Solar Installation Host #1**
- **PPA/Lease Agreements**

- **Solar 2, LLC**
- **Solar Installation Host #2**

- **Solar 3, LLC**
- **Solar Installation Host #3**

- **Solar 4, LLC**
- **Solar Installation Host #4**

**System Integrator/Installer**

- **$**

---

**Note**: The diagram illustrates the flow of funds and ownership in a renewable energy project, emphasizing the roles of different stakeholders, including developers, funds, and installation companies.
Solar Developer may provide certain guarantees to Corporate Investor and funds would be held in escrow accordingly. Yield guarantees, O&M, Insurance and funds released when guarantees burn off.

Lessor is owner of SEF, Investment Tax Credits, Tax Losses (Depreciation Deductions), Rebates, RECs, Recipient of lease payments, Potential residual buyout.

Solar Developer, LLC
Lessee

Corporate Investor
Lessor

Solar 1, LLC
Solar 2, LLC
Solar 3, LLC

Solar Installation Host #1
Solar Installation Host #2
Solar Installation Host #3

System Integrator/Installer
Financing Renewable Energy Project Fundamentals

Combining Section 42 (LIHTC) and Section 48 (Solar ITC)

**Fund General Partner**
- 1%
- Tax Credit Equity

**Investment Fund**
- ITC and LIHTC
- Tax Losses (depreciation)
- Cash flow

**Tax Credit Equity Investor**
- 99%

**Systems Integrator/Installer**
- Engineering Construction and Procurement Contract (EPC)

**LIHTC Operating Partnership (with Solar Installation)**
- 99%
- ITC & LIHTC Credits/Tax Losses

**Operating Partnership General Partner**
- 1%

**Developer**
- Developer Fee
The Captive Energy Company

Developer (Managing Member)
1%

Investor Member
99%
- Institutions?
- Individuals?
- Developer?

Captive Energy Company, LLC
- ITC (solar)
- Tax Losses (depreciation)
- PPA Revenues (cash flow)
- State subsidies

Public Utility
- MASH program
- Production based incentive

Systems Integrator/Installer

Engineering Construction and Procurement Contract (EPC)

Power Purchase/Lease Agreements

Multi-family Housing Project Host #1
Multi-family Housing Project Host #2
Multi-family Housing Project Host #3
Multi-family Housing Project Host #4
NMTC AND ITC TRANSACTION
LEASE-PASS THROUGH STRUCTURE

Solar Facility Owner, QALICB, LLC
Total Cost: $10,500,000
Eligible $10,000,000

Developer/Sponsor, GP
51% profits & capital interest
Equity $500,000

CDE Manager, LLC
CDE Management Co
.01% Managing Member

CDE Sub-CDE

QLICI Loan A: $2,000,000
QLICI Loan B: $1,400,000
QLICI Equity/Loan C: $5,600,000

ITC pass through election;
3% Return on Equity and 7% Put at exit

Master Tenant, LLC
Disregarded for Federal Income Tax purposes:
[All tax credits pass through]
49% profits and capital interest
Member of Property

Power Purchase Agreement

PV System Host

NMTC Investor
BANKCDC, INC
99.99% Member

ITC Investor
BANKCDC, INC
99.99% Member

NMTC Equity = $2,800,000 @ $.72/credit

ITC Equity = $3,800,000 @ $1.27/credit

Senior Lender
Debt $2,000,000

QALICB Affiliate Lender
Debt $1,400,000

CDE Fee: 8% of QEI - $800,000
$200,000 Upper Tier legal and accounting

Develop/ Sponsor, GP
51% profits & capital interest
Equity $500,000

NMTC: $3,900,000
ITC: $3,800,000
Cash

Net Cash and Debt Service

Net Cash and Debt Service

Lease Arrangement

NMTC & CDE Capitalization

Solar System Partnership & Capitalization

100% Owned LLC

§48(d)(5) Income
Tax Exempt Issues

Stephen B. Tracy
Novogradac & Company LLP
415-356-8010
stephen.tracy@novoco.com

Forrest Milder
Nixon Peabody LLP
617-345-1055
fmilder@nixonpeabody.com
Tax Exempt Use

- Credits are not available if there is “tax-exempt use”
- Can apply where:
  - The owner is tax-exempt
  - The lessee is tax-exempt
  - Complex rules where there is a part owner/lessee that is tax-exempt (“qualified allocations”)

The Grant is not available where a pass-through owner has any tax-exempts or governmental entities (more below)
The Section 7701(e)(1) factors

- (A) the service recipient is in physical possession of the property,
- (B) the service recipient controls the property,
- (C) the service recipient has a significant economic or possessory interest in the property,
- (D) the service provider does not bear any risk of substantially diminished receipts or substantially increased expenditures if there is nonperformance under the contract,
- (E) the service provider does not use the property concurrently to provide significant services to entities unrelated to the service recipient, and
- (F) the total contract price does not substantially exceed the rental value of the property for the contract period.
Section 7701(e)(4) factors

• This is a “safe harbor”

• (i) the service recipient (or a related entity) operates such facility

• (ii) the service recipient (or a related entity) bears any significant financial burden if there is nonperformance under the contract or arrangement (other than for reasons beyond the control of the service provider)
Section 7701(e)(4) factors – part 2

• (iii) the service recipient (or a related entity) receives any significant financial benefit if the operating costs of such facility are less than the standards of performance or operation under the contract or arrangement, or

(iv) the service recipient (or a related entity) has an option to purchase, or may be required to purchase, all or a part of such facility at a fixed and determinable price (other than for fair market value).
Govts./Tax-exempts not Eligible for Grants

- Grants cannot be made to
  - Federal, state or local governments (or any political subdivision, agency or instrumentality thereof)
  - to any organization described in Section 501(c) of the Code and exempt from tax under Section 501(a) of the Code
  - or any partnership or other pass-through entity any partner or equity or profits holder of which is such a government or tax-exempt entity
Ineligible Grant Participants -- What to do?

- Blocker corporations
  - For profit corporation owned by the ineligible entity
  - Remember these might have to pay taxes
- Good for exempt organizations; does this work for government entities? There’s an old definition of “instrumentality” in a 50-year old tax ruling
- Play it safe and make an election, in case you need to qualify for the ITC?
Combining Energy & Housing Tax Credits

Thomas Giblin
Nixon Peabody LLP
617-345-1102
tgiblin@nixonpeabody.com
Combining Energy & Housing Tax Credits

Understanding the Affordable Housing Tax Credit

- Part of 1986 tax reform to encourage the construction and rehabilitation of low-income rental housing
- Administered by the treasury department and allocated by state agencies
- Credit is a dollar-for-dollar tax reduction
- Credit amount based on the cost of constructing or rehabilitating housing developments
- 10-year credit stream/15-year compliance period
Combining Energy & Housing Tax Credits

AFFORDABLE HOUSING CREDIT PROGRAM REQUIREMENTS

- Residential rental property
- Minimum percentage of LIHTC Units (20/50 or 40/60)
- Minimum 30-year affordability commitment
- Maximum rents limited for LIHTC units
- Maximum income of households renting LIHTC units are limited
Many states have revised their qualified allocation plans to encourage sustainable building methods (including using solar energy).

To the extent that using solar energy allows a reduction in tenant utility allowances, that generally allows rents to increase by an equal amount.

Solar energy can be used for common areas to reduce a property’s operating expenses.

The cost of certain solar property may qualify for Energy Tax Credits (“Energy Credits”) under Section 48 of the Code.
Combining Energy & Housing Tax Credits

• The same property can take advantage of both Energy Credits and LIHTCs

• If the solar facility is being included in the initial construction or rehabilitation of a LIHTC property, then the solar property can be included in the basis for both tax credits

• If the solar facility is being added to an existing LIHTC property, the LIHTC basis is already established, so the Energy Credit can only be claimed on the solar facility
Combining Energy & Housing Tax Credits

ISSUES TO CONSIDER WHEN COMBINING HOUSING AND ENERGY CREDITS

• Not all properties are good candidates for solar energy
• Charging tenants for the use of electricity will cause the solar equipment to be reclassified as “commercial property” and prevent the solar property from qualifying for LIHTCs
• Energy Credits are allocated in accordance with an owner’s profits (unlike LIHTCs, which follow depreciation)
• The placed-in-service dates for solar property and the building may be different
• Energy credits reduce LIHTC basis
• Availability of state and local incentives
Combining Energy & Housing Tax Credits

SELECTING YOUR INVESTOR

- Not all LIHTC investors will buy energy credits
- Developers should decide whether to include solar panels during the early planning stages of a property and solicit investors who value both credits whenever possible
- Several issues with the energy credit vary from investor to investor, including the methodology used to calculate the equity, the timing of the payments, and the due diligence requirements
- Address these issues before selecting your investor to avoid any surprises
COMBINING ENERGY AND HISTORIC REHABILITATION AND/OR NEW MARKETS TAX CREDITS

Charles A. Rhuda III
Novogradac & Company LLP
617-330-1920 x 116
charlie.rhuda@novoco.com
ISSUES TO CONSIDER WHEN COMBINING ENERGY CREDITS WITH HISTORIC REHABILITATION CREDITS

- Not all properties are good candidates for solar energy
  - Physical challenges
  - Aesthetic challenges
- The placed-in-service dates for solar property and the building may be different
- Leveraging the credits
- Geo-thermal
ISSUES TO CONSIDER WHEN COMBINING ENERGY CREDITS WITH NEW MARKETS CREDITS

- Single entity structure vs. leveraged structure
- Additional complexity
- The placed-in-service dates for solar property and the building may be different
- The NMTC is based on investment, and therefore the ITC basis reduction does not impact the NMTC
- Related party issues – if a single investor
Thank you for joining us.

Please enjoy the cocktail networking reception immediately following.