

United Nations – 2nd Sustainable Energy Finance Roundtable

Lenders' Views on Sustainable Energy

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Manulife Financial Corporation

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Manulife Financial Corporation

- Leading global provider of financial protection and wealth mgt. products and services ... serving customers in 19 countries & territories
- Following acquisition of John Hancock in 4/04 ranks as largest life insurance company in Canada, 2nd largest in North America and 4th largest globally:
 - Largest company in Canada by market capitalization
 - Capital of US\$ 25 billion / Market Capitalization of US\$ 40 million
 - Total assets of US\$ 155 billion
 - Funds under management of US\$ 300 billion
 - ROE of 13.7% in '04 and 14.3% 1st 6 mos. '05
- Rated AA+ (S&P and Fitch) and Aa2 (Moody's)
- Within the company ... ethics, social & environmental responsibility is continually stressed and integral to the corporate fabric
- Signatory to both UNEP Financing Initiative and IFC Equator Principals

Investment – Motivation

- As a life insurance company we are required to hold substantial reserves to backstop our liabilities ... these must be prudently invested
- Reserves typically invested in liquid, investment grade bonds
- Smaller portion available for investment in higher yielding, less liquid investments such as corporate, real estate and project loans
- Incentive to lend is different than for banks ... insurance companies invest reserves ... whereas banks are spread lenders (borrowing on interbank market and reinvesting at a higher return)
- Liabilities tend to be priced on a long-term fixed-rate basis
 - insurance companies typically invest in assets providing long-term, fixed-rate returns
 - term financing in excess of 20-30 years available
- Power project investment ... both conventional and sustainable ... an ideal fit due to their stable long-term nature

Investment – Power

- Manulife & John Hancock have both been active investors in the power industry:
 - Over US\$10 billion in debt and equity invested in the sector
 - Investments in over 240 power companies or projects
 - US\$ 1.3 billion currently invested in renewable power
 - One of the largest project finance portfolios in the NA market
 - Over US\$ 1 billion in private equity
- Manulife is very committed to the industry ... maintaining Project Finance teams in Boston and Toronto
- Boston ... U.S. conventional and non-wind renewable power
- Toronto ... wind and other renewable and Canadian power projects
- Together ... 8 senior transactors & 6 analysts dedicated to power project financing ... with a strong focus on renewables
- Manulife/Hancock have the ability to arrange, underwrite and invest in project debt and equity ... in size

Investment – Portfolio:

Existing Portfolio:

- Heavily biased in favor of conventional (gas/coal) generation
 - function of opportunities available over past decade
 - number and average size of renewables opportunities was small
- Growing proportion coming from renewables sector (wind, hydro)
 - due to limited opportunities currently available in conventional sector
 - markets overbuilt ... with few exceptions
 - lender aversion to merchant exposure
 - CCGT no longer makes sense given gas price and scarcity
 - Little coal fired under construction ... regulatory uncertainty
 - RPS adopted in 19 states have led to rapid growth in renewable capacity (wind) ... even in overbuilt markets
 - renewable RFPs in most Canadian provinces ... driven by social policy and capacity shortfall in Ontario
 - Requirement to meet RPS obligations has forced utilities to offer PPAs in otherwise competitive markets

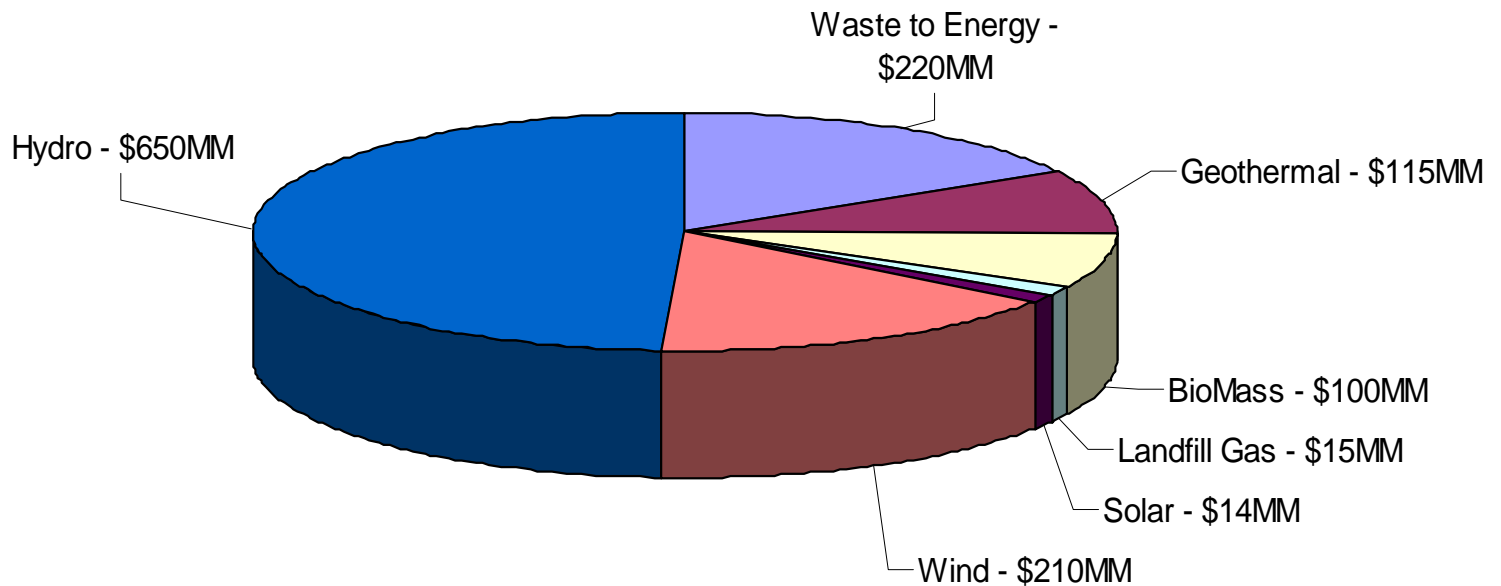
Investment – Portfolio:

Existing Portfolio:

- Manulife has not been a significant investor in ethanol or bio-diesel
 - no concerns with technology ... well developed and proven
 - input & output prices poorly correlated ... difficult to hedge
 - developers (often farmers' co-operatives) ... insufficient equity
 - proposed financing structures too highly levered
 - commodity exposure lends considerable variability and risk to cash flows ... better financed with floating vs. fixed rate debt
- Manulife, like most lifeco. lenders, prefers to invest in fully contracted projects ... hesitant to take commodity risk or market exposure

Investment - Renewable Energy Portfolio:

Manulife / Hancock Renewable Power Investments US\$ 1.3 billion



Investment – Strategy:

Conventional Power:

- Manulife will continue to invest in conventional power ... provided:
 - projects are highly efficient and employ cleanest technologies
 - environmentally and socially sound
 - fully contracted or hedged input and output prices

Sustainable Power:

- Manulife sees huge growth and potential in the renewable sector
 - technologies well proven
 - government intervention through RPS/RFPs have led to substantial increase in number and size of opportunities
 - PPAs readily available even in otherwise competitive markets
 - Federal subsidies ... in combination with very low operating costs ... have reduced break-even output pricing ... making possible the financing of merchant wind and hydro projects
 - Manulife has developed considerable expertise and understands the industry very well

Investment – Strategy:

Marketing Strategy:

Manulife takes an aggressive approach for an insurance company:

- active business development effort ... dig up the opportunities
- get involved with developer early
- build relationship and provide value through advisory
- introduce partners or equity investors as advisable
- structure, underwrite, syndicate project financing
- can provide senior and subordinate debt and project equity
- actively develop relationships with lending community (banks and other lifecos) ... happy to participate in other's transactions

Manulife is not currently taxable ... and can't monetize PTCs in U.S.

- we can provide senior and subordinated debt
- we can provide equity in Canada
- Manulife and most bank lenders ... being shut out of the U.S. wind market ... and with extension of PTC to other sectors will be shut out of the larger sustainable energy market as well

Sustainable Power – Drivers & Issues:

Government support takes many forms:

Wind in Canada:

- Federal incentive payment of 1¢/kwh (10 years) paid to project
- Provincially imposed RPS, RFPs and PPAs
- Given low capacity factors in Canada PPA rates ~ 8-10¢/kwh

Wind in U.S.

- Federal PTC of 1.9¢/kwh (10 years) ... credited to equity
- State imposed RPS generally leading to RFPs and PPAs
- Given higher capacity factors PPA rates ~ 3.5-5.5¢/kwh
- Merchant wind possible given high level of Federal support

Elsewhere:

- Standard Supply Contracts or Feed-In Tariffs ... at whatever price required to meet renewable objectives ~ +10¢/kwh

Subsidy by way of direct payment or tax credit ???

Sustainable Power – Drivers & Issues:

Industry Drivers:

- Renewable Portfolio Standards
 - requiring distributors to source % of sales from renewables
 - compliance enforced with meaningful penalties
 - much more effective if a Federal rather than state requirement
 - has resulted in more capacity additions than subsidies
- Direct Pay Subsidies
 - intended to level playing field ... allowing renewables to compete
 - not necessary if enforced RPS in place ... distributors must contract renewable supply or face heavy penalties
 - direct payments preferable to tax credits ... permitting greater number of investors to participate
 - greatest benefit ... in combination with low operating costs ... reduces break-even output pricing ... making financing of merchant wind/hydro/geothermal projects possible

Sustainable Power – Drivers & Issues:

Production Tax Credits:

- No other factor has caused greater disruption and added greater cost to wind power development
- Energy Policy Act of 2005 will extend PTC to other renewable technologies ... adding to the chaos and cost
- On-again, off-again nature will favor wind over other technologies requiring longer development periods
- Disadvantages smaller developers without resources to wait-out the next extension
- Much less effective than RPS in attracting renewable development
- Renewable projects huge volumes of PTCs
- Can only be utilized by a narrow group of developers/investors
- Majority of developers forced to sell their projects ... placing them on tread-mill ... without a long-term source of cash flow
- Not a lot of liquidity in tax equity market ... projects sold prior to commencement of construction ... ensuring developer does not get best value

Sustainable Power – Drivers & Issues:

Production Tax Credits:

- Irony ... tax investors are increasingly financial institutions ... with investment qualifying as equity for “tax purposes” but more debt-like in terms of risk
- This tax equity provides modest leverage ... requiring the developer to find additional funding ... but unable to provide security over project assets
- AWEA ... has single mindedly lobbied for PTC extension ... prolonging the addiction to PTCs and disruption to wind power development

Bottom line

- Why should a 1.9¢/kwh direct-pay subsidy be any less attractive to Federal Government than 1.9¢ in forgone taxes
- When ... a direct-pay subsidy provides many more advantages than a tax credit
- Subsidies (direct-pay or PTC) not necessary if a well structured RPS (with teeth) in place ... user pay rather than tax pay