The Role of a Pension Fund in Renewable Energy Investments

Transformational NAMA in the Renewable Energy Sector | May 2013
PensionDanmark at a Glance

› Industry-wide pension fund established in the early 1990’s

› 633,000 members working in 27,700 companies

› Total asset: €19 billon – and growing fast (2017: €26 billion)

› Target:
  › 10 per cent of assets ~ direct investments in renewable energy assets (equity)
  › 10 per cent in loans/debt to infrastructure projects
PensionDanmark is working with a life-cycle product

Per cent

- Investment Grade Fixed Income
- Index linked Bonds
- Public and Private Equity
- Corporate and Emerging Market Debt
- Real Assets (Real Estate and Infrastructure)
- Senior Secured Direct Loans

Age

-25 30 35 40 45 50 55 60 65 70 75 80 85 90+
The Challenge:
New Ways of Funding Investments in Renewables

› Global need for large scale investments in renewables and infrastructure

› Government financing is not an option due to budget deficits and rising debt levels

› The banking sector is much more cautious due to the economic outlook and changing capital requirements (Basel III)

› Utilities are trying to reduce balance sheets and capex expenditures

› Need for institutional investment capital, new models for financing and a different approach to risk-sharing
New Investment Opportunities

- Pension funds are looking for alternative investments due to historically low bond yields

Renewable energy Infrastructure

Pension funds LTI

A perfect match
**Investment Criteria**
For Direct Investments in Infrastructure Assets

- Stable and predictable earnings
  - Low demand risk and correlation to the business cycles
  - Long term investment horizon (+20 years)
  - Limited pricing risk (e.g. power price)

- No/negligible construction risk

- Limited political risk

- Partnering with experienced industrial players (constructor/operator)

- Alignment of interest
  - E.g. through significant ownership stake for the duration of the investment

- No or limited leverage

- Adequate SRI policies
Preferences

- Asset types:
  - Wind and Solar Farms with government guaranteed fixed in tariffs
  - Waste management/processing plants or biomass plants
  - Sub sea cables
  - Electricity grids
  - Transmission networks
  - Water companies

- Geographic focus at the moment
  - Northern Europe
  - North America (US, Canada)

- Ticket size min. EUR 100m. equity
Case 1: Anholt Wind Farm
Joint Venture between PensionDanmark and DONG Energy

› 800m EUR deal (for 50% of the park)
› Construction started late 2011 and will be completed late 2013
› 111 Siemens 3.6MW turbines = 400 MW

› DONG Energy responsibilities
  › Operation & Maintenance
  › Balance responsibility
  › Reporting and accounting

› Governance
  › Equal board representation (budgets, major repairs, repowering etc.)
  › Strategic forum at senior management level
Case 1: Anholt Wind Farm
Investment model

- **Stable returns**
  - High guaranteed minimum power prices until 2025
  - Concession until 2037
  - Significant share of operating costs are fixed

- **Limited risk**
  - “Turn-key” contract to deliver a fully operational park in April 2014
  - Limited power price risk
  - 5Y availability guarantee from Siemens
  - DONG Energy as a co-owner has an interest in keeping costs low
  - Relatively fast pay-back of investment
Case 2: On-Shore Wind Farms in USA
Joint Venture with E.ON in October 2012

- PensionDanmark acquired a 50% stake in three US wind farms from the German utility E.ON

- The assets:
  - Papalote Creek I+II (Texas): 109 Vestas turbines and 87 Siemens turbines
  - Stony Creek (Pennsylvania): 35 General Electric turbines
  - In total 433MW with COD in 2009/2010

- E.ON responsibilities:
  - Operation & Maintenance
  - Power and REC sales
  - Reporting and Accounting
Case 2: On-Shore Wind Farms in USA

Investment model

- **Stable returns**
  - 90% of the power is sold under long-term PPA’s with strong counterparties
  - Fixed power price under the PPA’s
  - Operating assets with a strong operational track record

- **Limited risk**
  - E.ON have a large US wind portfolio under management and as such is a very experienced O&M provider
  - E.ON retains a significant ownership share of the investment which ensures alignment of interest
  - O&M agreement provides sufficient comfort in terms of operating costs and availability
Case 3: Funding Danish Export orders with EKF
Framework Agreement with Danish Export Credit Agency EKF

› Framework agreement
  › PensionDanmark commits EUR 1.5bn in long term funding for projects with substantial Danish export content
  › Expected to be fully utilized in three years

› Return to PensionDanmark is higher than government bonds, with EKF (Danish State) guaranteeing the principle

› First transactions: 66 Vestas-turbines for on-shore wind farm in Sweden and off-shore park in Belgium
Case 4: Senior Secured Infrastructure Debt
Largest Institutional mandate on Infrastructure Debt

- PensionDanmark has given JP Morgan Asset Management a segregated mandate of USD 750m to build and manage a portfolio of infrastructure loans
- Focus on core infrastructure projects in Northern Europe and North America in the operational phase
- First portfolio of £225m UK infrastructure loans bought from Bank of Ireland
Case 5: Energy & Fertilizer Fund (EFIF)

Co-investment between Haldor Topsøe og Danish pension funds

- EFIF is based on the market leading technology of Haldor Topsøe and backed by 3 pension funds.

- Total commitment of USD 177m.
  - PensionDanmark: USD 62,5m

- Invests in fertilizer facilities in developing countries. Potentially also facilities within the Gas-to-Liquid segment.

- Favorable natural gas supply contracts as the alternative often is environmentally damaging flaring of the gas.
Case 6: Farmland
African farmland done sustainably and socially responsibly

- Focus on agricultural production and value chain investments in South East Africa
- High yield per acre, two harvest seasons a year and low land prices
- Close collaboration with local farmers on training, seeds and access to markets seeking mutual benefit
- PensionDanmark committed USD 60m
Case 7: DI Frontier Market Energy & Carbon Fund

Bridging the South East African energy gap

- Developing renewable energy assets in South East Africa addressing the countries’ demand/supply imbalances
- Team brings capital as well as project management skills
- Committed EUR 7m together with EIB, CDC and other Danish institutions