Reform of the power sector
The implications for allocating capital
BIEE Conference: Financing the Energy Transition
DATE: 19/09/2013
Introduction to Baringa

- Baringa Partners LLP is a market-leading consulting company with a focus on energy, commodities and financial services.

- Founded in the UK in 2000 – Baringa Partners has a market turnover of approximately £60m, with 300 professionals. Our German branch office was opened in 2011 to increase support of our clients in central and eastern Europe.

- Baringa Partners has a strong track record working with numerous companies in the international commodities trading markets – our capabilities and experiences extend across Oil, Gas, Power, Coal, Carbon and Soft Commodities; our clients comprise Oil Majors, Utilities, Investment Banks, Exchanges and Investment Funds.

- Through the recent merger with Redpoint Energy Baringa Partners has expanded its strategic advisory capabilities to serve strategic projects and transformation projects at the interface between business and technology challenges in the energy wholesale and retail domains.
Policy detail

*Increasing clarity on policy will lead to portfolios being rebalanced by existing investors and, potentially, to the arrival of new investors*

<table>
<thead>
<tr>
<th>Recent policy developments</th>
<th>Requirements of new investors</th>
</tr>
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<tbody>
<tr>
<td><strong>CPS rates</strong></td>
<td></td>
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<tr>
<td>- Confirmation of 2015/6 CPS rates in Spring 2013 increased confidence in pathway to 30 £/tCO₂ in 2020</td>
<td>- Many new investors have little prior experience of GB or other liberalised markets</td>
</tr>
<tr>
<td><strong>CfDs</strong></td>
<td></td>
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<tr>
<td>- Draft strike prices published in June 2013</td>
<td>- Part of the rationale for investing is often to learn from GB experience as home markets are liberalised</td>
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<tr>
<td>- Further documentation – inc. draft contract – published in August 2013</td>
<td></td>
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<tr>
<td><strong>Capacity Mechanism</strong></td>
<td></td>
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<tr>
<td>- Latest CM straw man and detailed design docs published in June 2013</td>
<td>- New investors more likely to make significant investments in GB as policy uncertainty falls</td>
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<tr>
<td>- Indication of key parameters e.g. CONE</td>
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<tr>
<td><strong>Electricity Balancing SCR</strong></td>
<td></td>
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<tr>
<td>- Draft policy decision published in July 2013 indicating a move to marginal cash-out prices</td>
<td>- Initially looking to limit risk to equity returns</td>
</tr>
<tr>
<td></td>
<td>- Deals are being structured to accommodate this</td>
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</tbody>
</table>
The emerging ‘mid-tier’

At the same time, new ‘mid-tier’ players are emerging, benefiting from the opportunity posed by the need for new investment

Equity funding is increasingly being sourced from a more diverse pool of investors

<table>
<thead>
<tr>
<th>Project development</th>
<th>Construction</th>
<th>Early operation</th>
<th>Mature operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilities</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Portfolio generators</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Project developers</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Infrastructure funds</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Private equity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pension funds</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Funding constraint

Recycling of capital, combined with the constraints on utilities, leads to growth opportunities for mid-tier players

Utility divestments

Mid-tier

Organic growth

Acquisition

e.g. RES, Infinis

Smaller developers

Source: DUKES, Baringa analysis
Response of the VIUs

The large VIUs are more likely to dispose of assets, rather than to acquire assets

There are many factors constraining the capital allocation decisions of Europe’s large utilities...

- **Market fundamentals**
  - Increasing renewables generation suppressing power prices
  - High gas prices relative to coal, leading to low spark spreads

- **Adverse policy decisions in home markets**
  - Phasing out of nuclear in Germany
  - Uncertainty over, or cuts to, renewables funding, sometime retrospectively

- **High debt servicing costs**
  - High gearing levels resulting from acquisitions made in a more favourable environment

- **Sale of non-core assets**
  - Sale of non-core assets to reduce debt burden and preserve credit ratings
  - Sales and re-focusing likely to continue

...leading to poor performance of shares and little opportunity to raise new equity

Source: FT.com, Baringa analysis
Available capital

As transparency improves over the allocation of risk through policy and regulation, the role of each type of capital will become clearer

<table>
<thead>
<tr>
<th>Funding source</th>
<th>Current share in GB</th>
<th>Trend</th>
<th>Current role</th>
<th>Future role</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK VIUs</td>
<td>●</td>
<td>↓</td>
<td>Role through full project life cycle</td>
<td>Increasingly not sole investor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Often sole equity provider, with investment held on B/S</td>
<td>Decline in share as a result of B/S constraints</td>
</tr>
<tr>
<td>European utilities</td>
<td>○</td>
<td>↔</td>
<td>Role through life cycle, but in particular through to construction</td>
<td>Divestment requirements likely to limit growth in GB role</td>
</tr>
<tr>
<td>Non-European utilities and conglomerates</td>
<td>○</td>
<td>↑</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Initially interested in regulated and/or low risk cash flows</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>May be a candidate to take on additional risk as they gain confidence / experience</td>
<td></td>
</tr>
<tr>
<td>Private equity</td>
<td>○</td>
<td>↔</td>
<td>3-5 year holding period</td>
<td>PE holding periods increasing</td>
</tr>
<tr>
<td>Sovereign wealth</td>
<td></td>
<td></td>
<td>Typically, but not exclusively, focused on operational assets</td>
<td></td>
</tr>
<tr>
<td>Infrastructure funds</td>
<td>○</td>
<td>↑</td>
<td>Focus on operational assets with tried and tested regulation and technologies</td>
<td>Some willingness to take on additional risk</td>
</tr>
<tr>
<td>International trading houses</td>
<td></td>
<td></td>
<td></td>
<td>e.g. already evident in onshore wind construction risk</td>
</tr>
<tr>
<td>Other financial investors</td>
<td>○</td>
<td>↑</td>
<td>Pension funds already invest e.g. where LT contracts are in place</td>
<td>Initially limited to assets with good operating track record</td>
</tr>
</tbody>
</table>
Evolutionary deal structures
Better optimised allocation of capital to match the allocation of risk and reward will continue to lead to more complex deal structures

Until recently VIUs drove the deals agenda
VIUs essentially managing bulk of the market risk
Other investors present but largely dependent on LT contracts (e.g. PPAs) that pass risk to the VIUs

Increasingly innovative risk-sharing structures are being deployed
New investors take an equity stake, but heavily protected from e.g. market / technology / yield risk
Risks taken on by utility, e.g. through PPA, OMA, SHA

This could even lead to new tiers of capital
Financial investors become increasingly familiar and confident with risks
Heavily tailored contracting structures fall away, but investor still requires a ‘preferred’ stake

Key
- G: Generator
- T: Commodities trader
- S: Supplier
- U: Utility
- FI: Financial investor

Contracts or transfer pricing
Ownership
Energy flows

Supplementary agreements to allocate risk between parties
Preferred equity or mezzanine debt
Project finance into generator or FI’s stake
Revolutionary deal structures

*Over time an optimal allocation of capital might lead to a fundamental change in the role of the utility*

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**Increasingly regulated revenues could lead to a larger role for portfolio generators**

- Much of the risk taken by VIUs will be transferred to consumers (e.g. through CfD, backstop)
- New investors may be able to get comfortable with the residual risk such that they can build portfolios with no utility investor
- Less risk is being transferred to the PPA counterparty, and the downside in the event of default is reduced, leading to a wider range of potential offtakers

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**This could lead to a change in the focus of a VIU**

- Utilities have taken on a wide range of activities
- More efficient risk allocation might lead to other/new market participants raising capital to finance power generation assets
- Utilities might then excel in managing operational risk and customers

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Setting deal criteria

*All investors need to be clear on their strategic ambitions in a changing market*

- New entrant investors need to...
  - Understand the residual risk in the market
  - Be clear on their appetite for taking on that risk
  - Set deal selection criteria accordingly

- Incumbent VIUs need to...
  - Revisit their business case for being vertically integrated
  - If this remains valid – determine how best to defend their generation market share
  - If not – determine what is ‘core’: what should I excel at?
  - Understand the implications for their shareholders
Thank you

Stephen Nash
Manager
Mobile: +44 7766 075885
Email stephen.nash@baringa.com

Baringa Partners LLP
3rd Floor, Dominican Court
17 Hatfields
London SE1 8DJ
UK
www.baringa.com