SMR
Funding Considerations
United Kingdom

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New Nuclear Programme

UK Electricity Mix (2020)

Nuclear energy offers security of electricity supply in UK’s energy mix:

- Resilience against volatile energy price rises;
- Relative independence from economic fundamentals; and
- Diversified fuel source.
- Supports UK Govt’s net zero carbon objectives.

- **Current nuclear fleet is retiring** - 11% of UK’s existing base-load generation by 2030 and 100% coal by 2025.
- The generation gap could be partially met by a combination of large Nuclear and SMRs as it offers:
  - Security of supply and enables self sufficiency;
  - Diversification in the energy mix; and
  - Cheapest form of low carbon generation.
# Key Funding Considerations

**Key considerations in evaluating the merits of alternative structures dependent upon UK Govt objectives;**

I. UK IP  
II. UK Govt Balance Sheet impacts  
III. Manufacturing of SMRs in the UK  
IV. Cost of Capital/Value for Money  
V. Availability of Private Sector Finance  
VI. Risk transfer to the Private Sector  
VII. Robustness of State Aid compliance (MEIP)  
VIII. Opportunity to maximise competition for SMR investment  
IX. Acceptability to SMR project developers (balance sheet capacity)  
X. Fleet roll out implications  

**Implications**

I. Strategic corporate equity funding.  
II. Risk allocation balance between Govt, taxpayers, consumers.  
III. Government objective.  
IV. Value For Money (VfM) Analysis.  
V. Dependent upon ability to recover investment, target equity returns, debt repayments and future sales.  
VI. Project cost and strike price impacts to be evaluated.  
VII. State Aid Challenge funding risk.  
VIII. Post FOAK competing consortia to be considered.  
IX. Strong investment grade developers required to bear construction and operation risks.  
X. Higher risk for FOAK – applications of lessons learnt drive lower risks/costs of NOAK / fleet roll out.

UK Govt evaluating key objectives, financial models, scenarios with a view to informing potential policy options.
Key Risks and Funding Issues

**Key Risks**

- Power price offtake
- Price volatility
- FOAK vs NOAK construction, technology and operation risks
- Funded decommissioning program
- Third party nuclear liability
- Other nuclear specific risks, regulatory/safety

SMR’s vs conventional nuclear;
- lower debt quantum’s
- lower construction risk – modular design
- NOAK roll out drives VfM

**RAB Model**

UK Consultation finished 14 October, considering responses and decisions will be made in due course subject to new Government. The following are key features of a typical RAB Model;

- Revenue determined by an independent Regulator to remunerate efficiently incurred costs + a fair return on invested capital.
- Invested capital characterised as a ‘Regulated Asset Base’, determined as the depreciated capital cost of the project.
Contractual Structure

- Land and project assets are owned by the Project Company (PC);
- Competitive procurement process to appoint either:
  (i) Technology/Design Contractor (TC) Stage 1; or
  (ii) Consortium including TC, EPC Contractor, Operation and Maintenance Contractor (Stages 1 and 2).
- PC is the borrower owned by the sponsors;
- Technology provider eventually contracts with the EPC Construction Contractor;
- Flexible Strike Price under the CFD.