MADNESS vs. WISDOM OF CROWDS: MODELS FOR FINANCING NUCLEAR POWER

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Preliminaries

• Dual challenge of supplying energy for global economic growth while zeroing out carbon emissions.
• Nuclear should be an ideal technology option.
• Prospects are mixed.
• In the US and Western Europe, one key issue is construction delays and huge cost overruns.
  – Also social acceptance for safety and waste.
What is the role of Finance?

- Cannot be a substitute for reducing actual construction costs.
- Do some financing models add to cost, while others reduce cost?
  - Why? How?
Conventional Wisdom in the U.S.

- New build nuclear is not possible in the regions with competitive wholesale power markets.
- Only possible in regions with traditional rate-of-return regulated utilities.
  - Why? How?
- Conventional wisdom fails to confront historical experience.
  - In the 2000s, many owners of merchant nuclear plants invested significant amounts in life extensions and capacity uprates.
  - In the early 2000s, a significant number of prospective new builds were planned as merchant plants.
Experimentation in the U.K.

- **Contract-for-Difference for Hinkley Point C.**
  - Government must hedge wholesale price risk on-behalf of the private investor. This is the key to reducing financing costs.
  - But construction risk remains with the private investor.

- **Regulated-Asset-Base for Sizewell C.**
  - Government cost-of-capital is just lower.
Misdirection

- **Key to lower cost finance does not lie in any creative model.**
  - The case for CfDs stood in direct conflict with everything we learned about financial risk sharing since the 1970s.
- **We seldom discuss one key issue in financing large capital cost assets dedicated to a location: COMMITMENT**
- **Recent history reveals significant political risk for owners who sink capital into nuclear plants.**
  - Outright bans
  - Targeted taxes
  - Out-of-market payments to competing generation technologies.
- **Look at the fine print of the agreement with Hinkley C.**
Net-Zero Goals Deepen the Need for Commitment

• The generation profile is changing rapidly, driven by evolving policies and developing political forces.
  – Market design is also changing.

• The future industry and market structure is hugely uncertain.
  – Mix of politics and technological uncertainty.

• Incentivizing large investments in fixed assets will require social/political commitment.
Madness vs. Wisdom

- **Madness:**
  - the hunt for creative financial models that magically produce lower financial cost;
  - shifting the risk does not magically reduce the financing cost; the government’s cost-of-capital is not necessarily less than private investors’.

- **Wisdom:**
  - low-c investments are urgently needed;
  - private investors will rationally demand social/political commitment.
THANK YOU