

New-Build Nuclear Power Station Finance

Can Risks be Controlled?

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The Crux of the Problem

- Because of their long execution times, favourable financing is very important to nuclear station economics
- Favourable financing schemes in turn are very dependent on a project's risk profile
- Unfortunately, it is difficult to find a class of projects with a poorer risk history than nuclear power plants
- Then the key questions become
 - *Why* are nuclear power plant projects so problematic?
 - Can the risks be controlled?

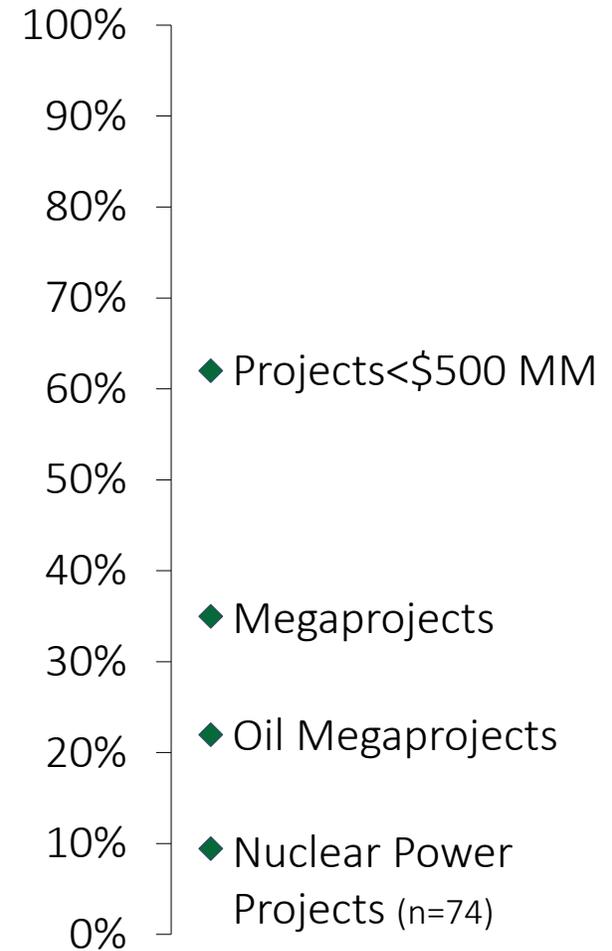


Defining Success and Failure

We deem a project to be a *Success* if all occurred:

Costs Grew (real)	Less than 25%
Cost Competitiveness	Less than 25%
Execution Schedule Slipped	Less than 25%
Severe and Continuing Operability Problems (First two years)	No

Success Rate



Risk Reduction Requirements

Effective Shaping

- Allocation of project benefits and costs into a configuration that is stable and will not collapse and create turbulence in execution

Stable Basic Data

- Early days were plagued by constant design changes
- Reasonable stability in design now achieved

Strong integrated owner team

- Very few NPP owners have had the strong project organisations essential to controlling the projects
- Cannot field cross-functional teams
- Have deferred and lost control to contractors

Complete Front-end Loading (FEL)

- Detailed understanding and accounting for the site context for the project
- Bringing the design to a point from which full detailed design can commence at sanction
- Very high levels of project execution planning, supply chain management, scheduling, controls planning, constructability analysis, contracting planning, change management, data management

When these four conditions are met, the megaproject success rate exceeds 80 percent

There is no reason to believe that NPPs will not follow the same pattern

Thank you



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