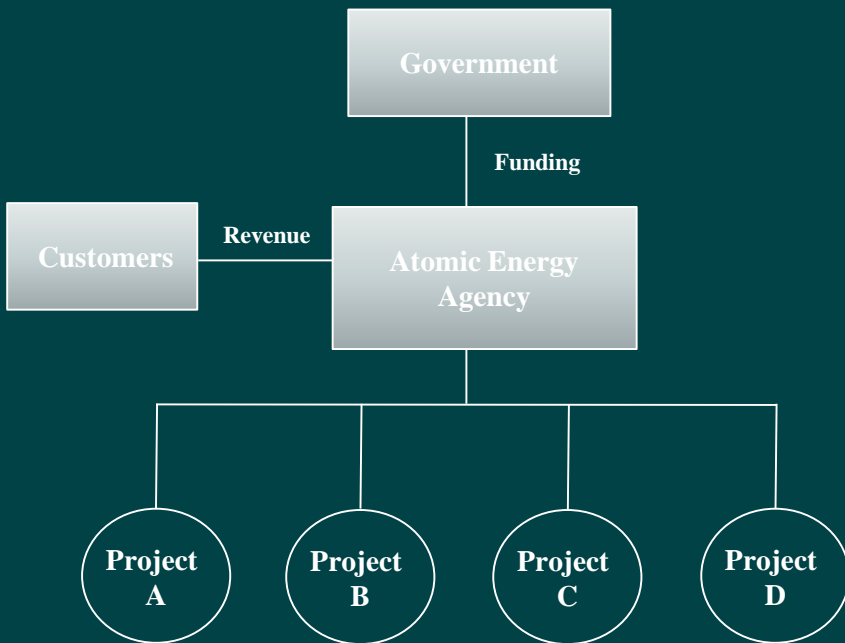


INLA WORKING GROUP 3 – SUB-GROUP OVERVIEW: POWER SALES AND MARKET RISK MITIGATION

3 May 2017

TRADITIONAL NUCLEAR PROJECT DEVELOPMENT

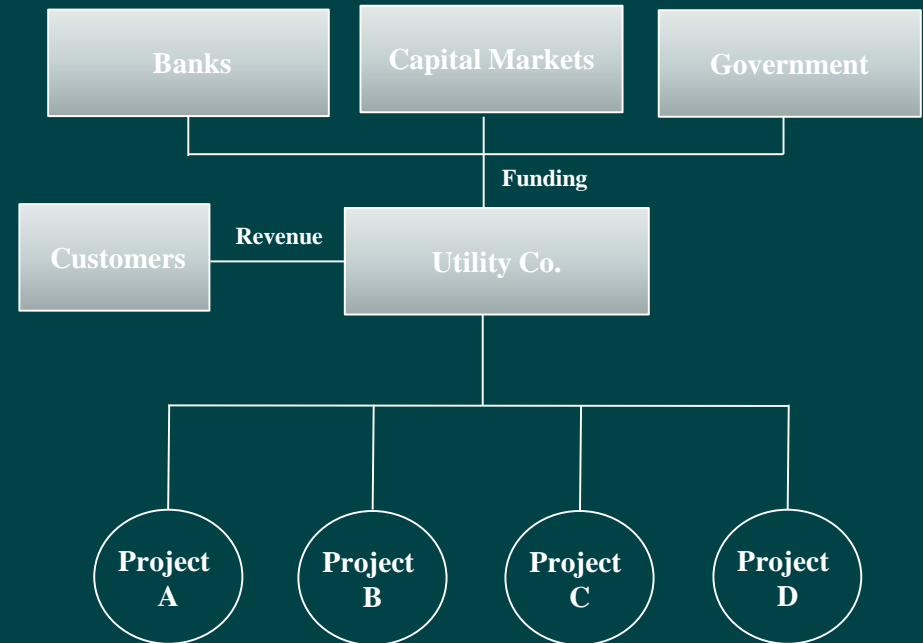
STATE OWNERSHIP



Examples:

- 4 x 60 MW Calder Hall NPP, United Kingdom

REGULATED UTILITY

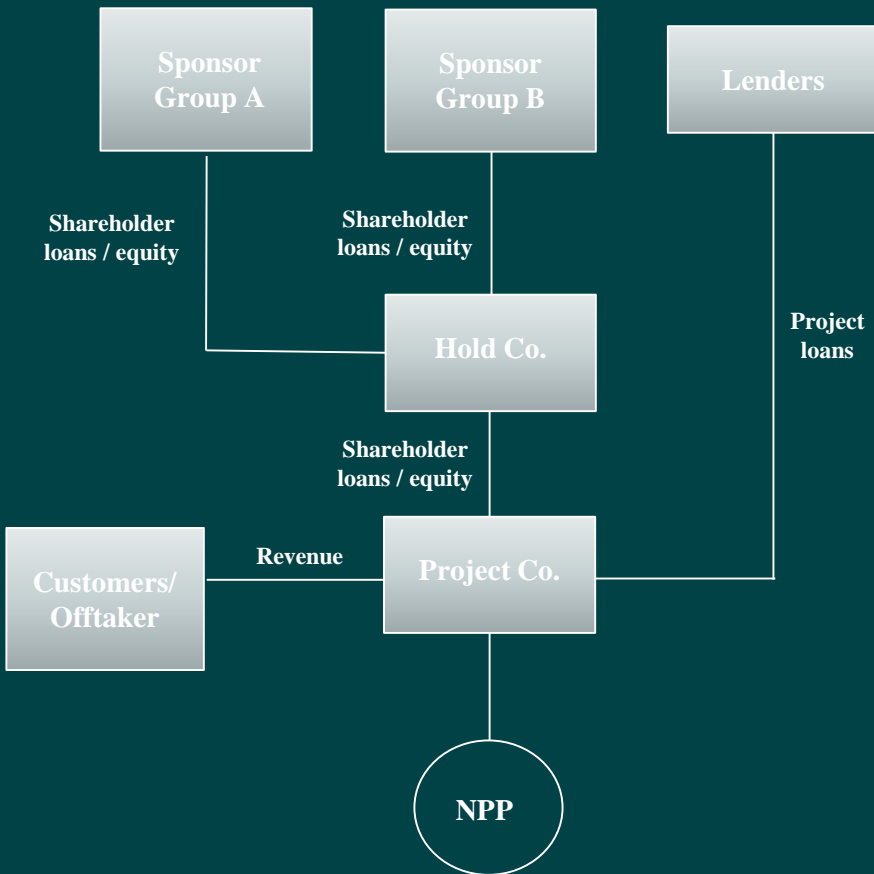


Examples:

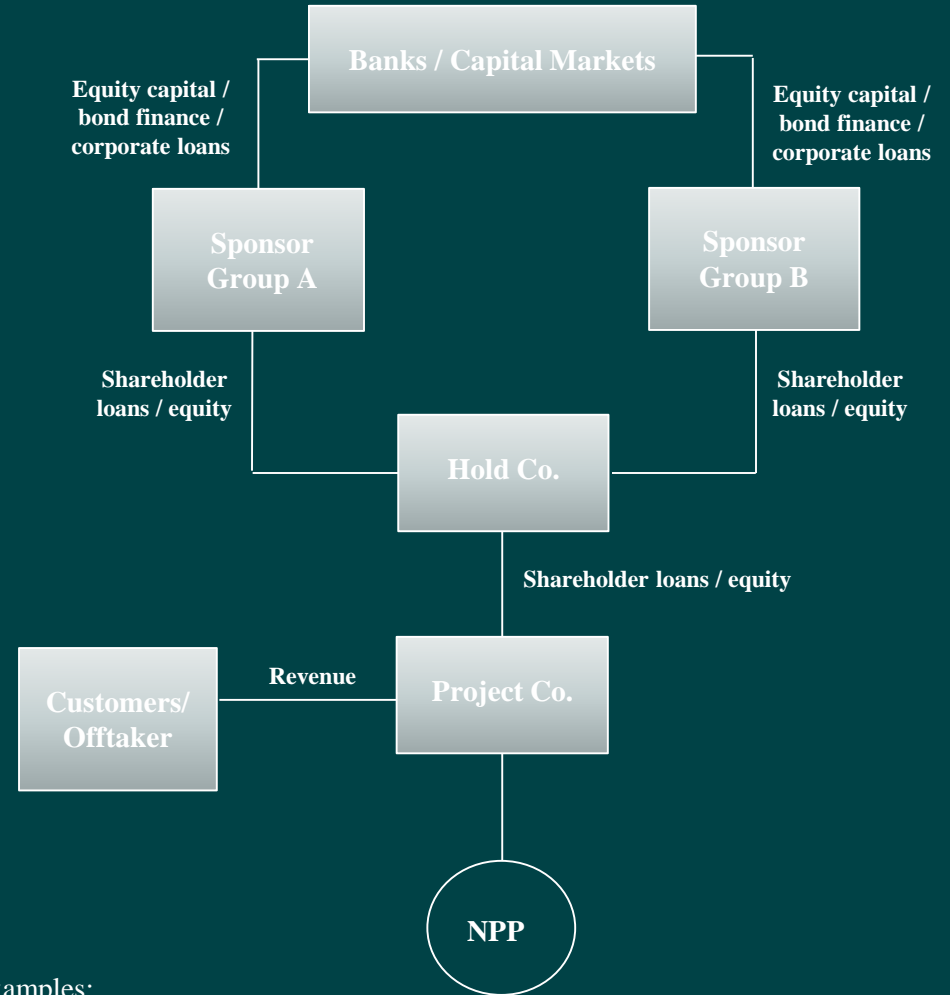
- 1,650 MW Flamanville-3 NPP, France
- 540 MW Shoreham NPP, New York, USA

NEW TRENDS FOR NUCLEAR PROJECT DEVELOPMENT

PROJECT FINANCE



PRIVATE/HYBRID



Examples:

- 3,200 MW Hinkley Point C NPP, United Kingdom

PATHFINDER PROJECTS AT A GLANCE

PROJECT/LOCATION	SPONSOR(S)	ELECTRICITY MARKET STRUCTURE	KEY FEATURES
2 x 1,600 MW Hinkley Point C NPP, Somerset, United Kingdom	Électricité de France (EDF) & China General Nuclear (CGN)	Liberalised	<ul style="list-style-type: none"> • Project structured on a private/hybrid basis • Project company sells power at market price to EDF (UK) trading division (for on-sale in wholesale power market) • Key government support: Contract for Difference
4 x 1,400 MW Barakah NPP, Abu Dhabi, United Arab Emirates	Emirates Nuclear Energy Corporation (ENEC) & Korea Electric Power Co. (KEPCO)	Single Buyer	<ul style="list-style-type: none"> • Project structured on a private/hybrid basis • Project company entered into PPA with Adwec (state-owned utility)
4 x 1,200 MW Akkuyu NPP, Republic of Turkey	Rusatom Energy International (REIN) & Turkish investors TBC	Partially liberalised	<ul style="list-style-type: none"> • Project structured on a private/hybrid basis • Project company to (i) enter into PPA with TETAS (state-owned utility) for part of the facility's output; and (ii) sell the balance of the output through the Turkish wholesale market

SUB-GROUP AREAS OF FOCUS

ELECTRICITY MARKET STRUCTURES

- Nature of the market
- Key institutions and stakeholders
- Role of the developer

DISPATCH REGIMES AND GRID BALANCING

- Nature of the dispatch regime and balancing mechanism
- Characteristics of nuclear facilities
- Market access
- Compatibility with power sales plan

POWER PURCHASE AGREEMENTS

- Offtakers
- Tariff structures
- Key risks (e.g. political risk, termination, regulatory intervention)

PUBLIC SUPPORT MECHANISMS

- Intergovernmental Agreements
- Mandatory PPAs
- Government Guarantees
- CfDs, capacity markets etc.