

Financing alternatives

Which have been most effective and why?

IFENC

May 2016

Agenda

01

02

03

***Financing
alternatives***

Other Factors

Government's role

01

02

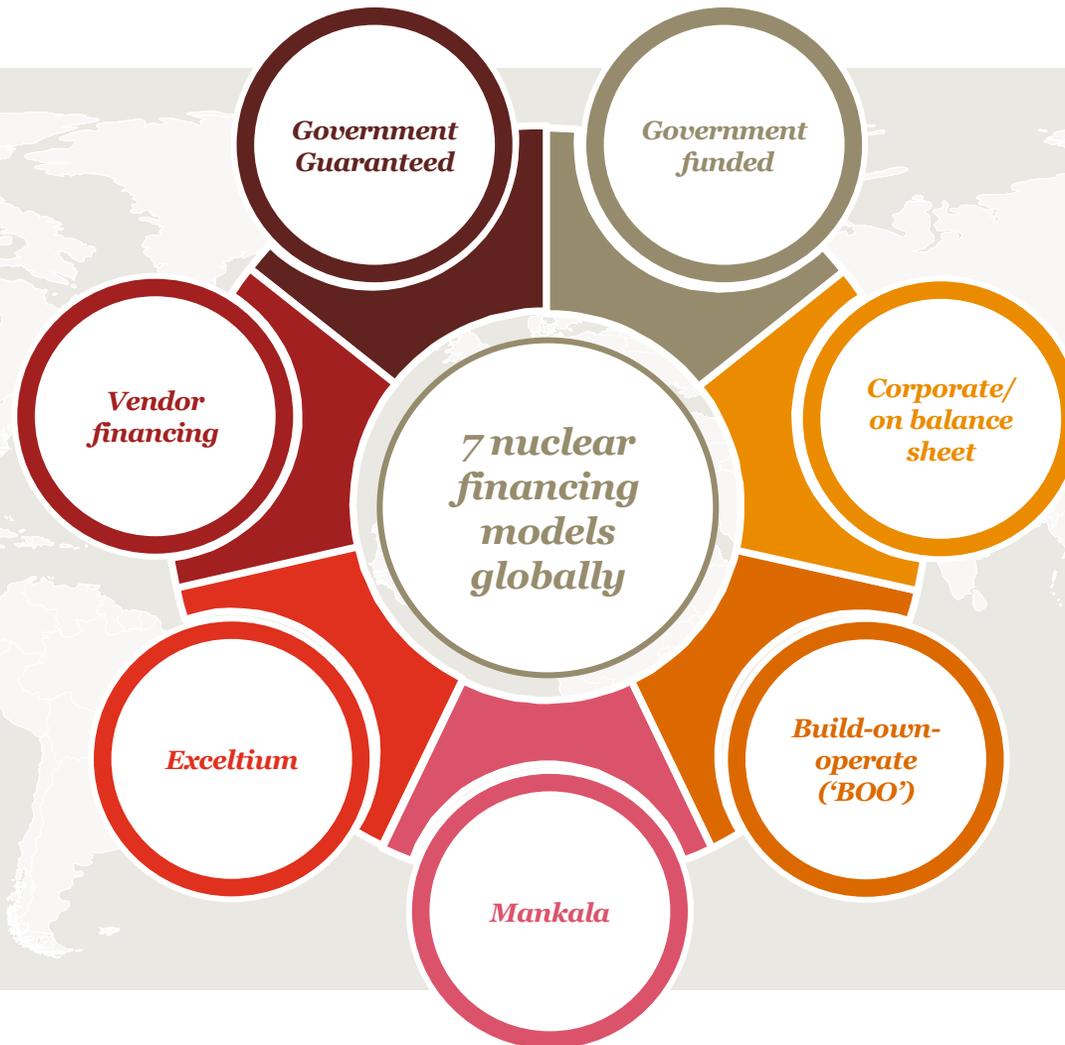
03

***Financing
alternatives***

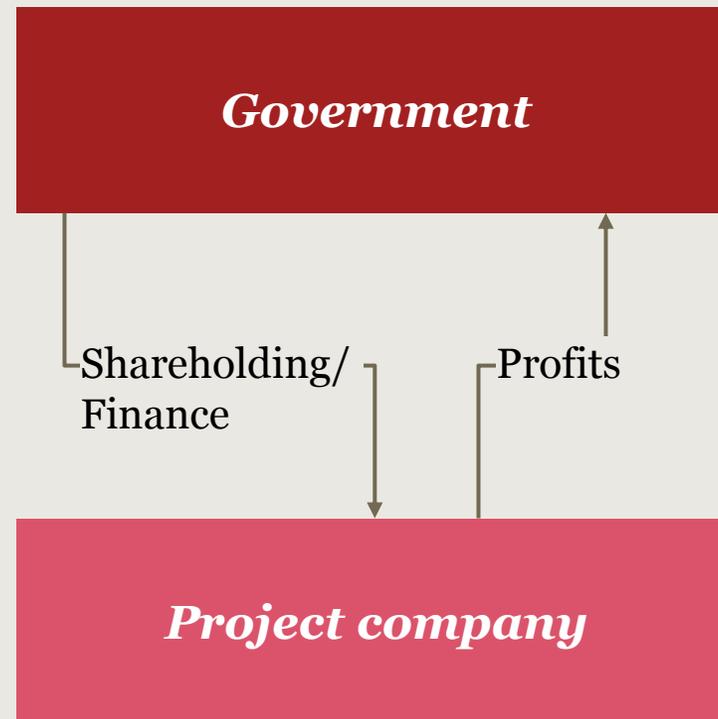
Other Factors

Government's role

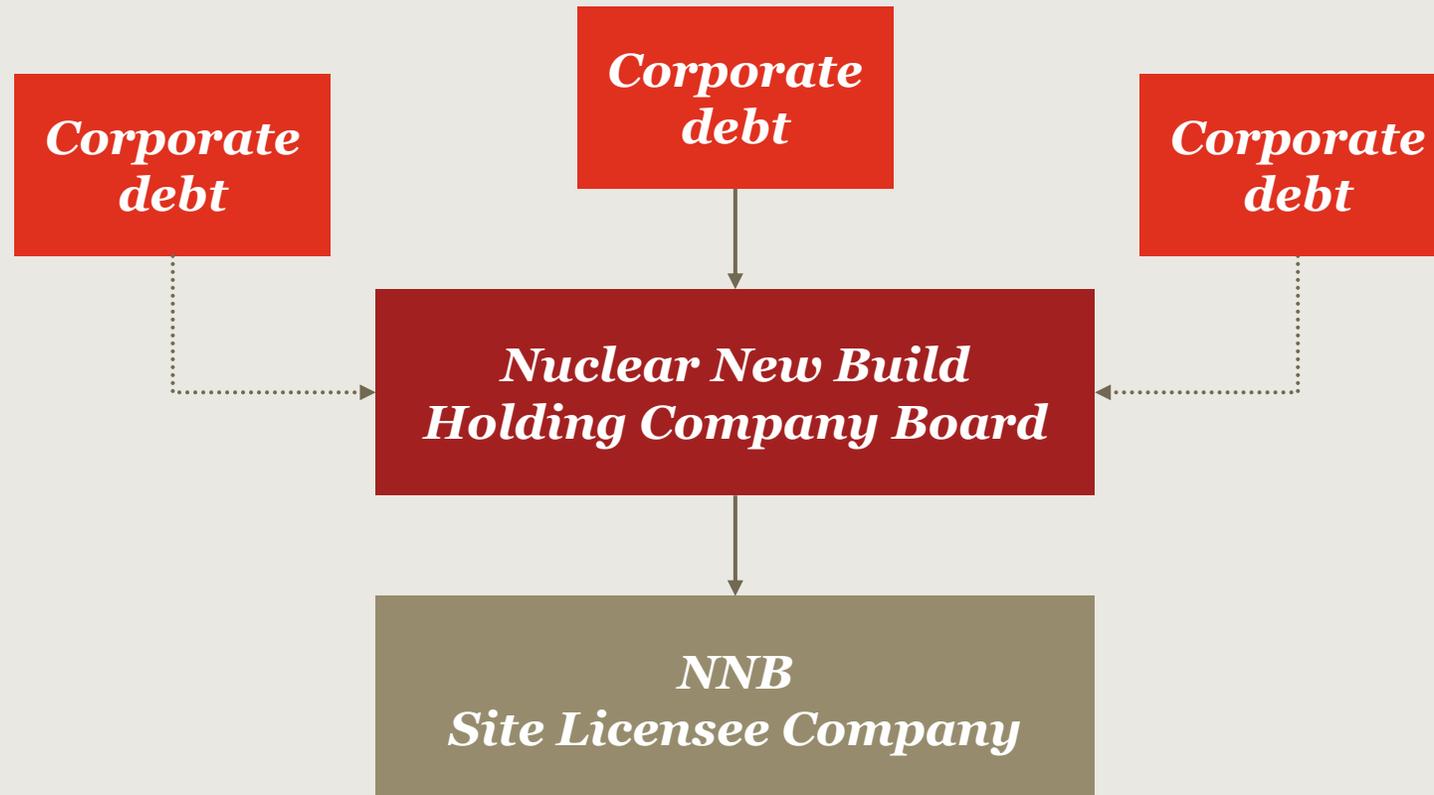
Financing options



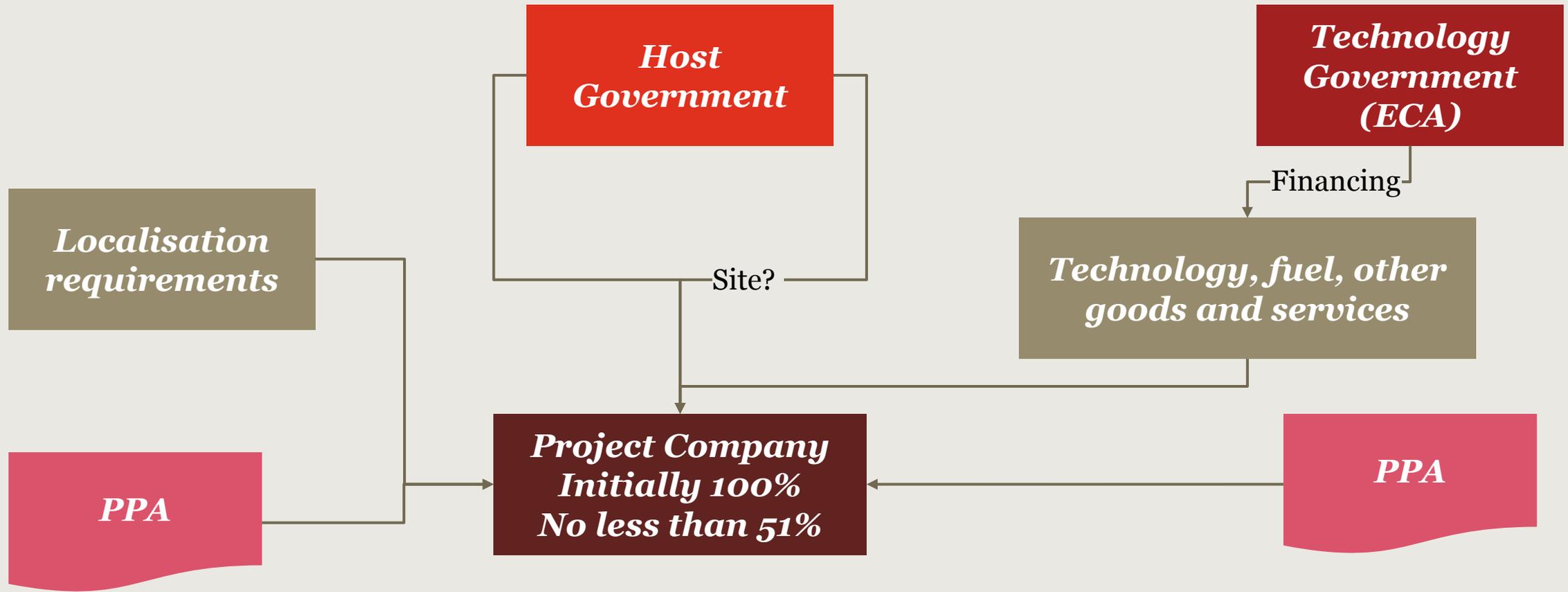
(Traditional) Nationalised Industry



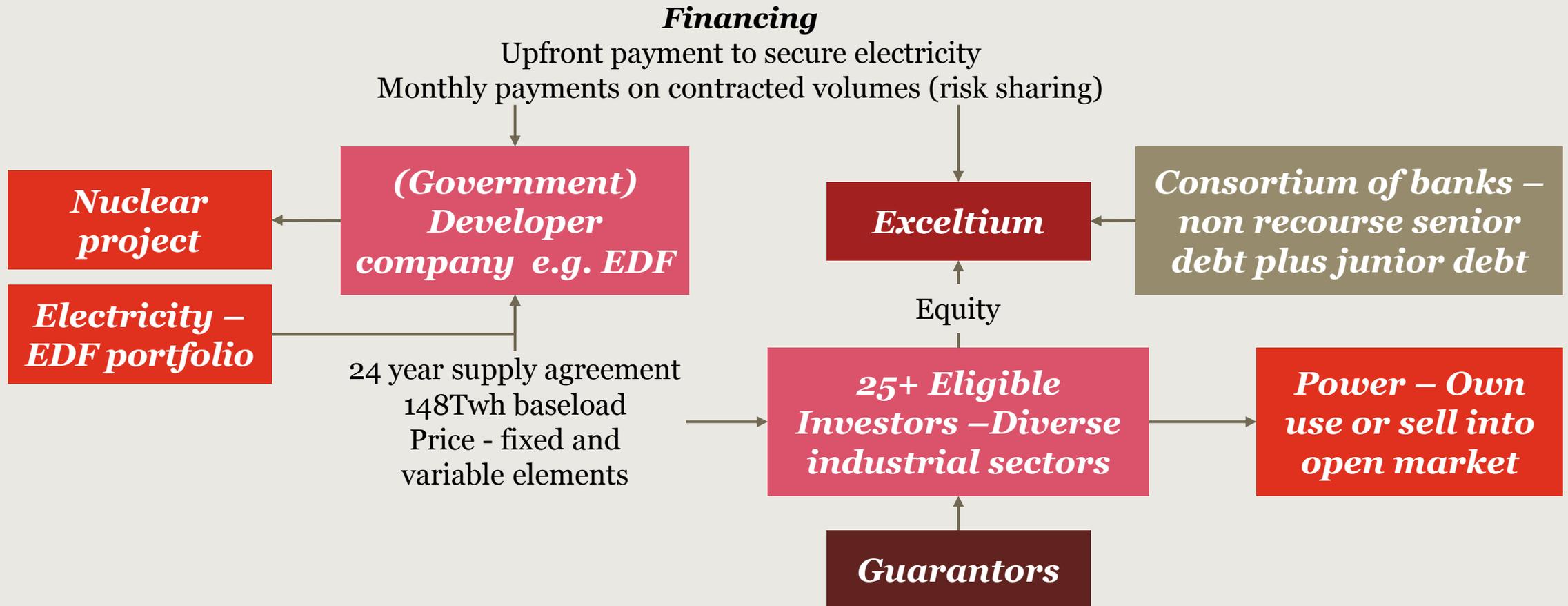
Balance Sheet/Corporate Debt



BOO(D)

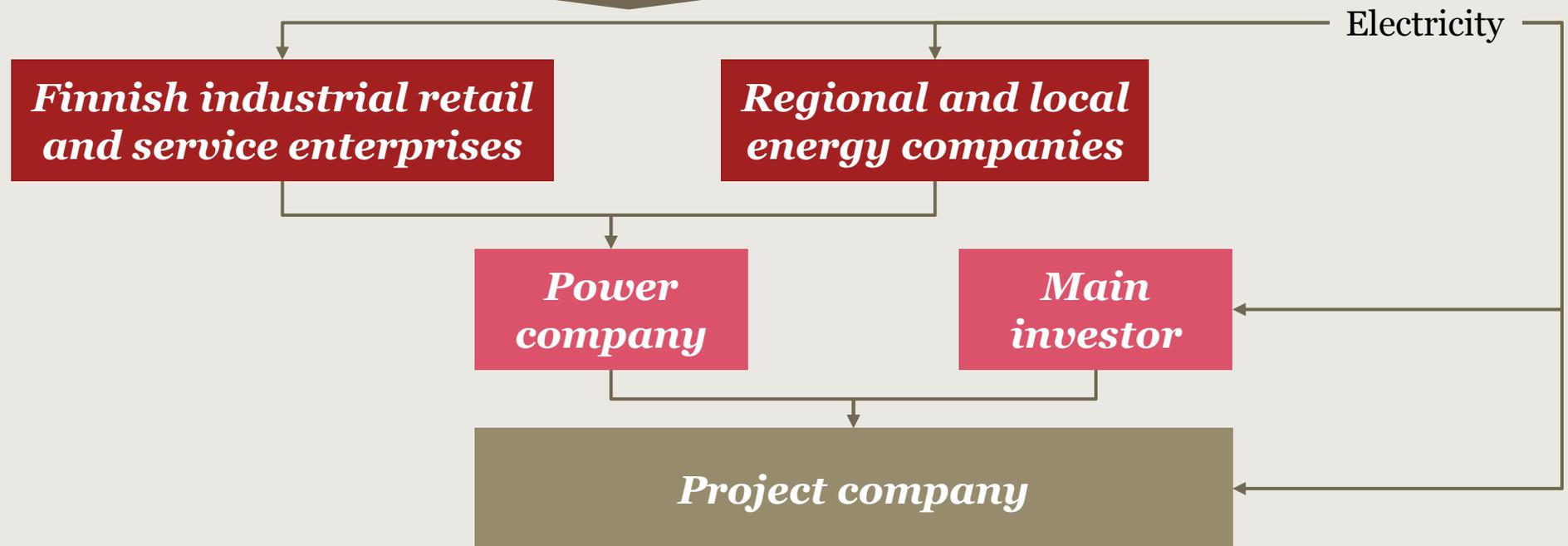


French Exceltium

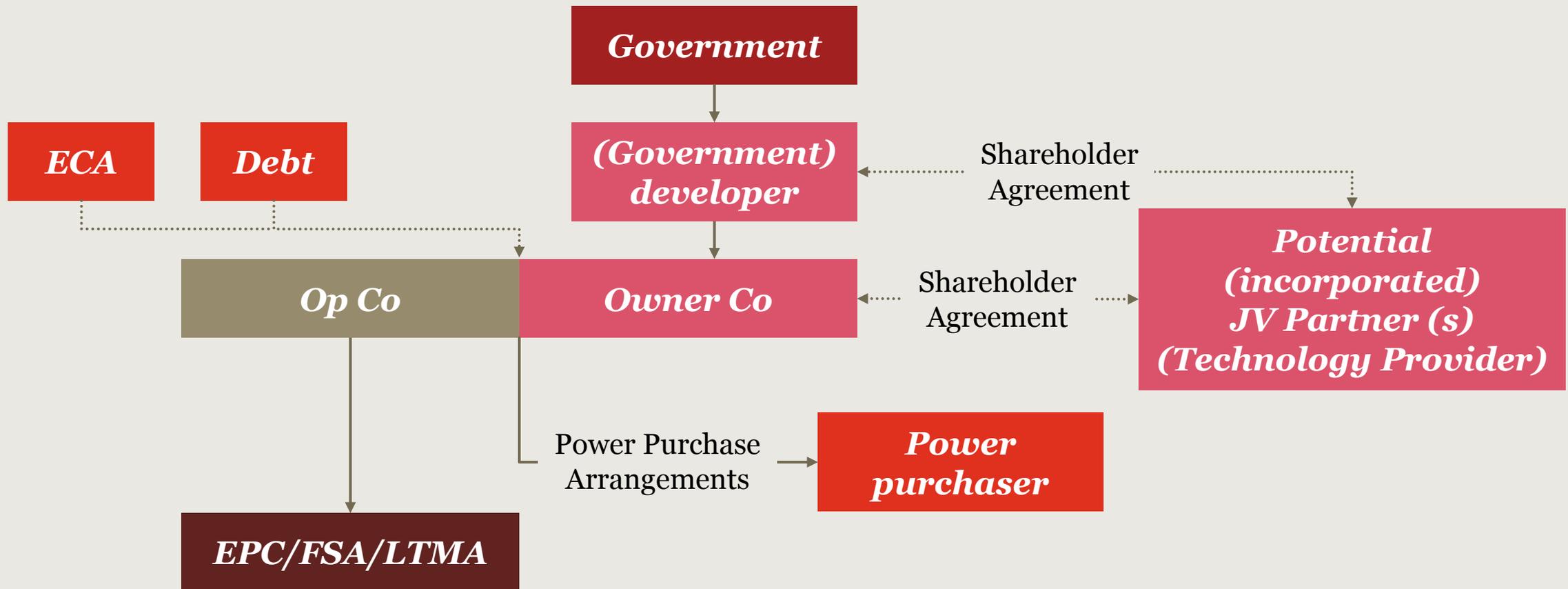


Finnish Mankala

Financing mix of corporate debt, vendor loans, ECA financing, bilateral loans

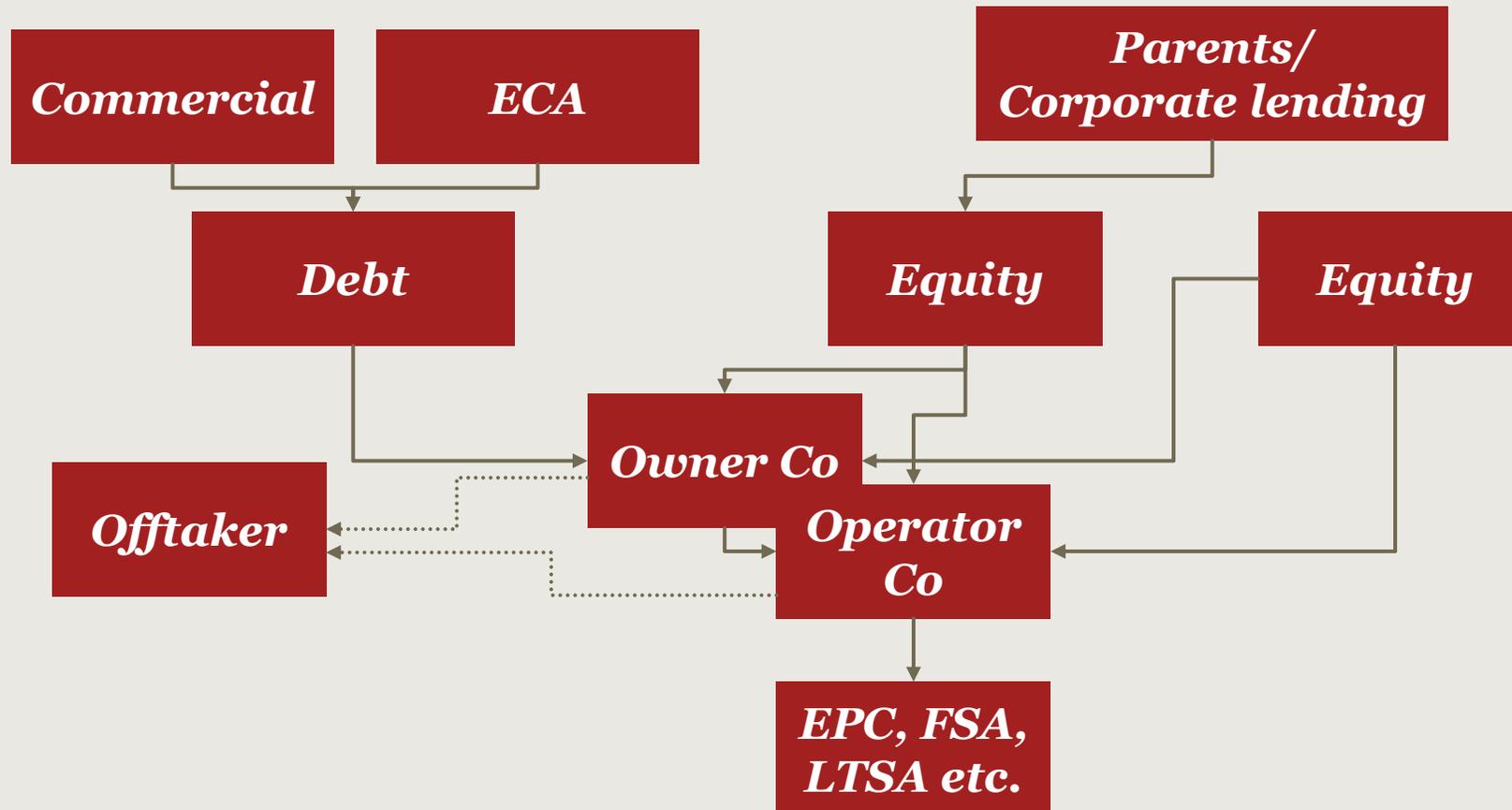


Trend – Central Europe/Russia/Middle East



Sharing risks

Balancing regulatory and financing requirements



01 02 03

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Risks



Long term investment and financing:

- 5 – 7 construction period
- 40 years operation
- 15 – 18 year pay back period for debt (OECD arrangement for ECA)
- Refinancing



Risk register needs be compiled for stakeholders inc. financiers e.g.:

- Interface risks
- Technology risks/ transfer
- Delays
- Cost overruns/ variations
- Regulatory
- Decommissioning and waste policies
- Off-take

Structuring (Owner/Operator)

Model is evolving

Traditionally, Owner and Operator roles are combined in one legal entity, the Site Licensee Company ('SLC'); however internationally, the market is moving to having 2 or more legal entities, 1) as Owner and 2) as Operator (the Operator being the SLC). All stakeholders will want to agree the structure.



Benefits in splitting

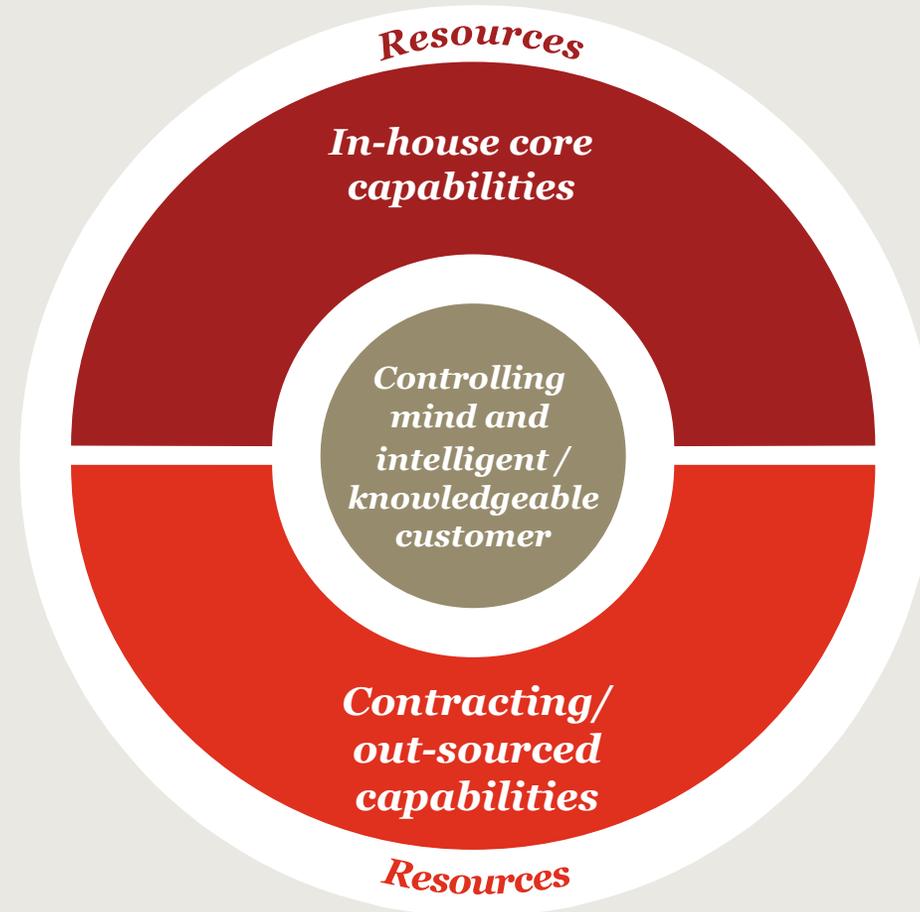
- Export credit agencies ('ECAs') and other lenders may be more comfortable lending to a company that is not a nuclear licensed company
- Third party liability strict liability of the Operator
- Allows different ownership options for different entities



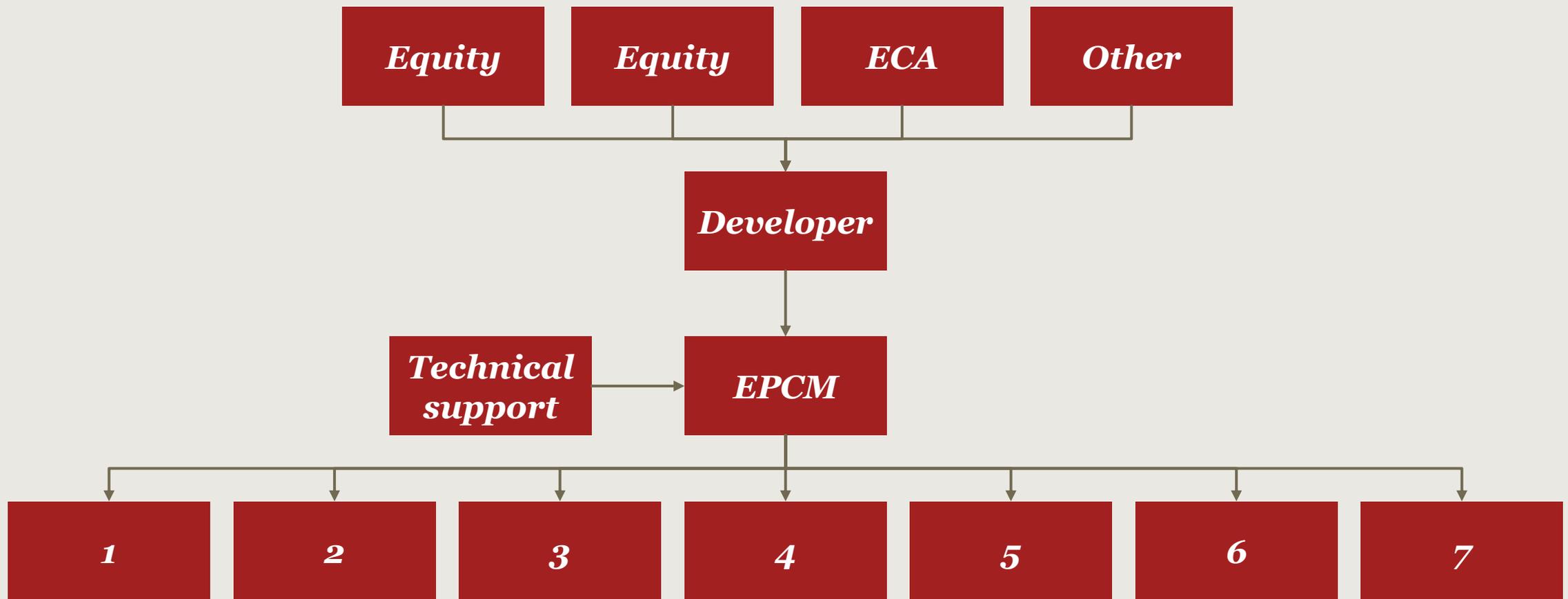
Challenges in splitting

- Regulatory approval process
- Needs contract for site management and operating including funding between Owner and Operator

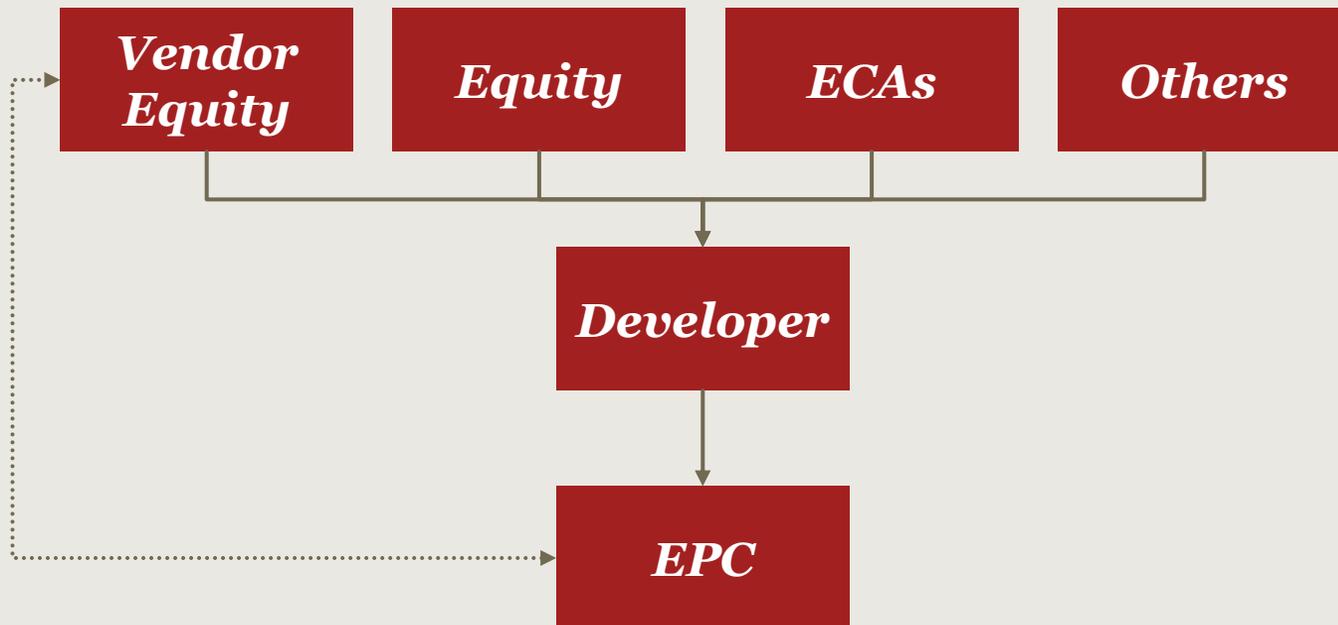
Capability requirements – in-house or supply chain



EPCM



EPC



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Role of Government

- Policy supporting the development of nuclear power plant – cross party
- Providing a strong rule of law
- Stable environment for the development of new nuclear by the private sector
- Partial owner/developer
- Insurer of last resort including nuclear liability
- Guarantor of debt
- Guarantor of off-take agreement/offtaker
- Decommissioning and waste management solution



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Conclusion

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Summary

- Bespoke solutions
- Be clear what your objectives are
- Government has a key role to play in every country
- Define structure/ procurement strategy/ framework early with stakeholders
- Drive alignment/integration of procurement and funding activities
- Early but balanced engagement with market, financiers, equity and government
- Don't take the project too far in developing the project before engaging the market
- Create a manageable and realistic roadmap to completing the financing jigsaw!



Fiona Reilly

PwC | Capital Projects and Infrastructure – Global nuclear lead



For over 20 years Fiona has been involved with projects in the nuclear industry. She remains a highly regarded specialist, particularly by industry, in the nuclear market. She is familiar with and has worked on all aspects of the nuclear cycle from new build and licensing to decommissioning, fuel storage and waste management.

She has a detailed understanding of the international regulatory framework within which the nuclear industry works and frequently advises on liability regimes and nuclear insurance, regulatory and reporting requirements, the development of regulatory regimes, feasibility studies and structuring as well as the financing, development, construction, operation and maintenance of nuclear stations and the fabrication, reprocessing and storage of nuclear fuel and waste.

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She is recognised as an expert in the development and financing of nuclear projects by the International Atomic Energy Agency (IAEA) and has served as a designated expert on the financing, development and structuring of nuclear projects and on decommissioning and waste funding at special meetings of the IAEA.

She is co-author of the chapter on the resolution of disputes in the nuclear industry in “Dispute Resolution in the Energy Sector: A Practitioner’s Handbook.”

Fiona has worked on nuclear new build projects in the UK, Central Europe, Russia and the Middle East and has worked on life extension, decommissioning and fuel management project.

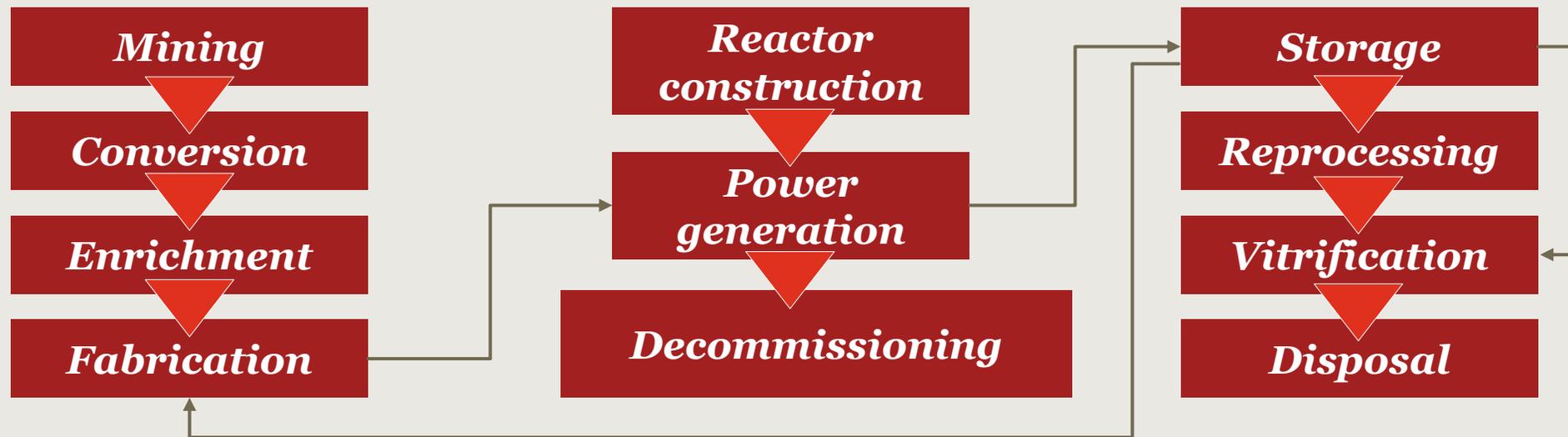
Understanding of the nuclear market

We advise on nuclear new-build, operational nuclear issues and on decommissioning and waste management

We understand policy, regulatory and financing issues associated with the nuclear sector and why certain solutions are not universally applicable.

We know participants and stakeholders across the globe

We understand the risks faced by participants in different countries and different parts of the value chain



Experienced in the global nuclear market

Logos at the top: NDA, AWE, Westinghouse, Rolls-Royce, GOVERNMENT ENERGY CLIMATE CHANGE, RWE The energy to lead, INTER RAOUES, TOSHIBA, Urenco enriching the future

Logos on the left: Sellafield Ltd, UKAEA UK Atomic Energy Authority, SLOVENSKE ELEKTRARNE, m m, TER DAP, Eskom, Energie NB Power, Fortum, FENOC, INPO, PSEG, STP Clean, Safe, Reliable, EDISON AN EDISON INTERNATIONAL COMPANY, SOUTHERN COMPANY, ANDRA, EDF, CEI, e-on, Enel, AREVA, TransCanada in business to deliver

Logos on the right: VATTENFALL, NRC, TVO, KYUSHU ELECTRIC POWER CO. INC., NEK, O13, I2, Dominion

Service Boxes:

- The financing of new build projects (including the use of export credit agency and multilateral borrowing sources)*
- PPA and CfDs, and other regulatory and revenue models*
- Structuring projects to achieve an optimal finance solution*
- Regulatory compliance advice*
- Risk analysis and management*
- Decommissioning funding assessments and review*
- Government support mechanisms, including guarantees*
- Organisation development*
- Governance and operating model design*
- Project construction and operational support*
- Joint venture and alliance design and stand-up*
- Contracting and procurement support*

Thank you

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