



CASTLETOWN LAW

Castletown Law

DELIVERING DEPLOYMENT OF ADVANCED NUCLEAR POWER

An introduction

- Specialist Law firm
- Energy and Infrastructure experts
- Operating internationally
- Staffed by experts in their field
- Highly experienced senior lawyers
- Experts in Regulatory processes
- Master planning and project architecture specialists
- Multiple papers published
- ABS model delivering value to clients



Solicitors **Regulation** Authority



Market Positioning and Client Value Proposition



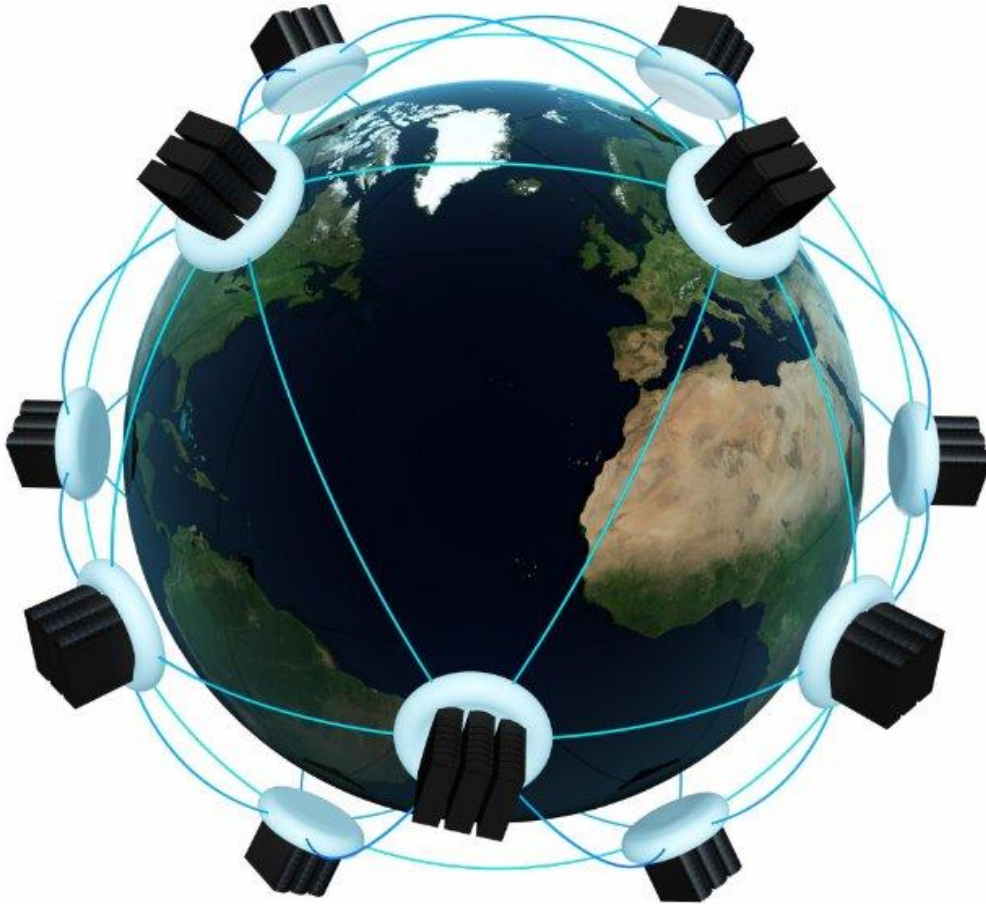
- **Client-Aligned Market Positioning**
 - Castletown Law focuses on capital-intensive, long-duration projects with high risk, especially in energy and infrastructure sectors.
- **Pragmatic, Delivery-Focused Advice**
 - Advice is grounded in real project experience, emphasizing practical solutions over theoretical legal concepts.
- **Early Engagement to Reduce Risk**
 - Supporting clients early shapes projects to minimize risks, avoid redesign, and improve financial viability.
- **Integrated, Collaborative Approach**
 - Seamless integration across legal, commercial, and technical teams enhances informed decision-making and project progress.

Castletown Law: Energy and Infrastructure Specialists



- **Specialized Sector Expertise**
 - Castletown Law focuses on energy and infrastructure with deep expertise supporting full project lifecycles.
- **Experienced Legal Practitioners**
 - Practitioners bring over 20 years of experience, anticipating regulatory risks especially in nuclear sectors.
- **Modern Operational Model**
 - Alternative Business Structure enables integrated legal, commercial, and strategic advisory services for clients.
- **Global and Strategic Focus**
 - The firm advises on cross-border energy projects, emphasizing energy transition and infrastructure resilience.

Global Nuclear



- Renewed Global Interest
 - Energy security and decarbonisation efforts are driving renewed global interest in nuclear power as a low-carbon baseload energy source.
- Diverse Market Dynamics
 - Different countries show variation in regulatory regimes, financing models, and public acceptance affecting nuclear market development.
- Innovation and Advanced Reactors
 - Growing focus on advanced reactor designs like Small Modular Reactors and Generation IV technologies to address cost and risk challenges.
- Legal and Commercial Complexity
 - Navigating international contracts, export controls, and nuclear liability regimes is critical in the global nuclear market.

Opportunities and Strategic Direction



- **Small Modular Reactors**
 - SMRs offer factory manufacturing, shorter builds, and scalable deployment matching demand growth.
- **Expanded Nuclear Applications**
 - Nuclear supports industrial decarbonisation, hydrogen production, and district heating beyond electricity generation.
- **Programmatic Deployment Strategy**
 - Fleet-based approaches enable cost reduction, learning, and supply chain development over time.
- **International Collaboration**
 - Cooperation in technology, regulation, and export markets advances nuclear sector globally.

SMR Deployment Overview and Lifecycle Logic

End-to-End Lifecycle Stages

SMR deployment follows a lifecycle from policy setup through construction to decommissioning, ensuring structured progress.

Programmatic Deployment Model

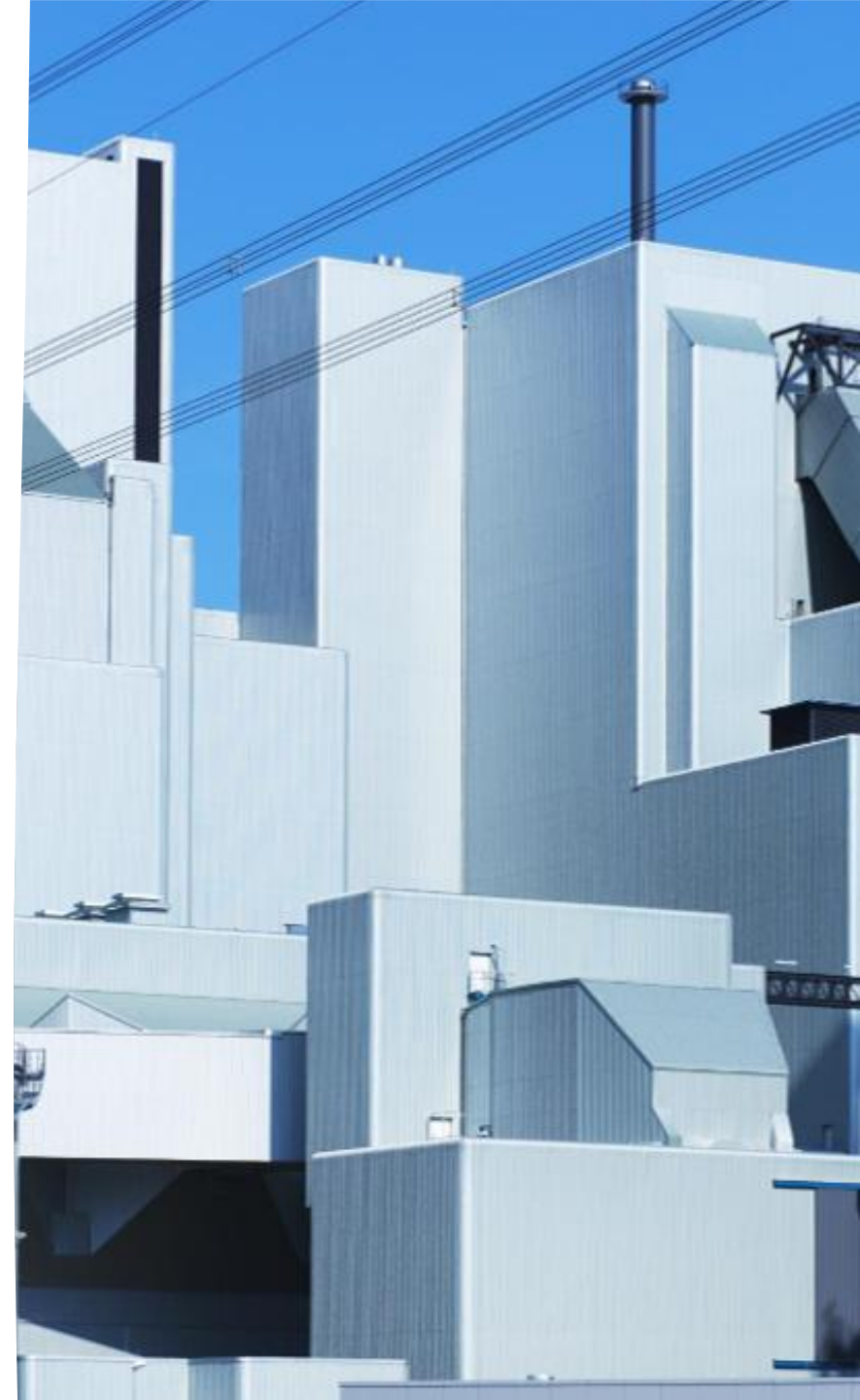
Using standardised designs and repeatable processes, the UK deploys multiple SMRs efficiently, reducing risks and costs.

Risk Management and Confidence Building

Progressive risk management ensures commitments are made with confidence, supporting investor and public trust.

Role of Legal Governance

Legal advisers structure governance and manage obligations, ensuring clarity and enforceability throughout the lifecycle.



Policy and Programme Setup



- **Strategic Policy Definition**
 - Government defines nuclear power goals, capacity targets, and SMR roles within the energy system.
- **Institutional Delivery Bodies**
 - Creation of dedicated organizations to manage SMR programmes and ensure effective delivery.
- **Legislative and Regulatory Frameworks**
 - Development of laws, regulations, and financing mechanisms to enable safe, efficient SMR deployment.
- **Policy Alignment and Clarity**
 - Ensuring coherence with net zero, energy security, and economic goals to reduce uncertainty.

Site Selection and Planning Consent



- **Flexible Site Selection Approach**
 - The UK uses a flexible, criteria-based approach allowing SMRs on various suitable locations beyond traditional nuclear sites.
- **Community and Stakeholder Engagement**
 - Early involvement of local authorities, communities, and stakeholders addresses concerns and builds acceptance for SMR projects.
- **Planning Consent Process**
 - Planning consent is obtained via detailed environmental and social impact assessments under the Nationally Significant Infrastructure Project regime.
- **Foundation for Investment**
 - Achieving legal consent and social acceptance ensures a stable foundation for investment and SMR construction.

Technology Selection and Vendor Engagement



- **Structured Competitive Process**
 - Vendors submit detailed reactor proposals evaluated on technical, safety, and regulatory criteria.
- **Early Vendor Engagement**
 - Ongoing interaction helps clarify requirements, mitigate risks, and assess supply chain readiness.
- **Strategic Partnership Model**
 - Selecting preferred technologies creates partnerships supporting long-term deployment and resource focus.
- **Legal and Risk Management**
 - Confidentiality, intellectual property, and contractual foundations are crucial for collaboration success.

Early Regulatory Engagement and Design Assessment



- **Proactive Regulatory Engagement**
 - Early interaction with regulators helps reduce uncertainty and avoids costly redesign of SMR projects.
- **Generic Design Assessment Process**
 - GDA allows regulators to assess reactor designs generically, ensuring safety and environmental standards are met.
- **Agreed Intervention Strategy**
 - Establishing clear interaction protocols between developers and regulators supports project momentum and investor confidence.

Nuclear Site Licensing



- **Regulatory Gateway**

- Nuclear site licensing authorizes safe construction and operation of nuclear facilities under strict regulations.

- **UK Licensing Authority**

- The Office for Nuclear Regulation grants licences after assessing organisational safety and site management capabilities.

- **Comprehensive Assessment**

- Licensing requires evidence on safety, waste management, site justification, and decommissioning plans.

- **Early Regulatory Oversight**

- Licences may be granted before final construction details are set, allowing early but controlled regulatory involvement.

Financing and Final Investment Decision



- **Critical Commitment Stage**
 - Final Investment Decision marks a crucial point of commitment after selecting technology and site.
- **Collaborative Financing Structures**
 - Developers, government, and investors establish financing using various models like asset base or government support.
- **Risk and Revenue Finalization**
 - Detailed cost estimates, risk allocation, and revenue agreements are finalized to ensure project viability.
- **Policy and Regulatory Confidence**
 - Long-term policy stability and regulatory certainty are essential to unlock large-scale construction spending.

Construction and Installation



- **Site Preparation and Construction**
 - Initial work includes non-nuclear site preparation followed by conventional construction activities and safety-related nuclear works.
- **Modular Manufacturing**
 - Significant components are manufactured off-site in factories and transported as modules for on-site assembly, enhancing quality control.
- **Regulatory Oversight**
 - Licensees must demonstrate compliance with strict regulations and submit safety documentation at key stages during construction.
- **Completion and Readiness**
 - Successful construction results in a fully assembled plant prepared for commissioning and operational readiness.

Summary and Key Takeaways

Strategic Nuclear Context

Outlined the importance of nuclear and SMR development in securing low-carbon energy for the UK.

Programmatic SMR Deployment

Emphasized a standardized, repeatable approach to SMR deployment reducing risks and improving deliverability.

Early Engagement Benefits

Highlighted early policy alignment, technology choice, and regulatory interaction as crucial for success.

Castletown Law Expertise

Castletown Law supports clients through strategic advice and risk management across nuclear lifecycle stages.



Our Team



Andrew Renton
Castletown Law

Andrew has been involved in advising clients in the nuclear sector since the mid-1990s.

He has advised on national programmes in the UK, Turkey, Jordan, Egypt, Estonia and the UAE. He has discussed the potential for development of nuclear programmes in a number of other countries. He is currently working on a paper on the proposed revisions to the Nuclear Site licencing requirements and radiation protection regulations in the UK. Andrews papers and booklets on SMR and AMR technology regulation and deployment are available on the CTL website:- <https://www.castletownlaw.com/recent-papers>

Andrew also leads on commercial and industry related issues and is a leading solicitor in the energy and infrastructure industry, who specialises in commercial aspects of the sector across multiple jurisdictions. His approach to transaction and mandate management is endorsed and praised by clients, and he is particularly known for structuring the architecture of complex projects and achieving a solution-based outcome for clients in some exceptionally complex multinational projects.

Louis Plowden Wardlaw



Louis served as General Counsel for Terrestrial Energy, a pioneering company at the forefront of next-generation nuclear energy solutions. His role there involved advising on financing instruments, corporate structure and all the cross-border legal aspects of building a company with a mission to deliver safe, sustainable, and innovative energy technologies. His previous roles include a six-year tenure as a Director of Argo Real Estate Opportunities Fund Limited, where he advised on the fund structure and legal steps in acquiring building and managing retail parks across Central and Eastern Europe, and Senior Legal Adviser and Head of Legal at the Royal Bank of Canada, London.

Louis is deeply engaged in progressive industries and regulatory developments, leveraging his background in law and finance to address emerging market challenges. Louis holds an LLB (First Class) from the University of Birmingham, an MSc in Finance from London Business School, and an MSc in Conservation and Biodiversity Law from the University of Kent. Called to the Bar of England and Wales in 1990, Louis is also a Liveryman of the City of London, reflecting his deep connection to the city's historic and professional traditions.

Our Team



Maroof Mittha
Castletown Law

Maroof advises on energy and infrastructure matters, focusing on international nuclear regulation and transactions. Recently, he has supported Simon in reviewing the International and EU nuclear legal frameworks to identify changes required in Estonian legislation. In the UK context, he has advised on the law and regulation of Plutonium stockpiles, use of Americium, review of the legislative framework in the context of advanced nuclear, UK taxonomy regime for nuclear as clean power, and additionality criteria for fuels produced from nuclear energy.

During his LLM in International Energy Law and Policy, Maroof focused on EU and International Nuclear Law, the legal framework for international project finance. His Master's dissertation, which received a Distinction in 2021, was on legal and policy developments on nuclear power under the European Union Law, assessing the relevance of the Euratom Treaty and nuclear decommissioning framework.



William Wilson
Castletown Law

William is an independent barrister and legal consultant, expert environmental and energy lawyer, with 25 years' experience, in government, consultancy and private practice. He worked for 9 years in the UK Government Legal Service at the Department of the Environment/DETR/Defra, which included managing UK and EU legislation, advising Ministers and the Department on UK and EU radioactive substances law. For example, on Sellafield THORP, MOX and emissions decisions and cases, drafting implementing EU legislation such as the Basic Safety Standards Directive and advising on environmental and nuclear law issues concerning the Atomic Weapons Establishments.



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