

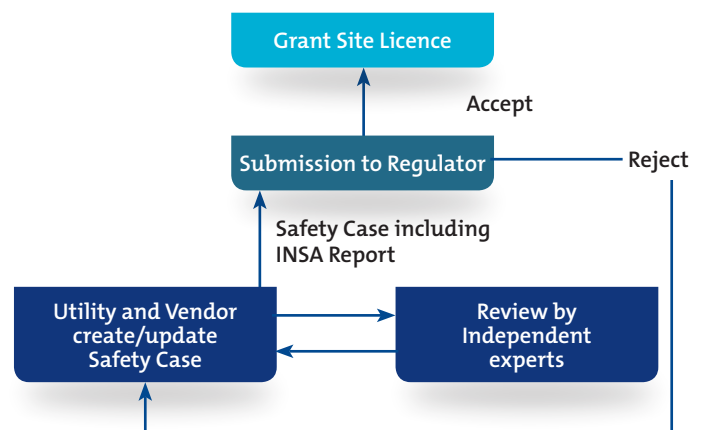
Independent Nuclear Safety Assessment (INSA)

The Independent Nuclear Safety Assessment INSA (often referred to as an Independent Peer Review) must be performed by individuals or organisations separate from those responsible for facility design.

With a world-class Nuclear Safety capability Rolls-Royce is ideally placed to provide INSA services to support the civil nuclear industry. We pride ourselves on a technical depth of knowledge and experience spanning many specialised areas. Our employees have both the appropriate nuclear new build/in-service INSA experience and understanding of the relevant regulatory regime.

Rolls-Royce INSA services are conducted in accordance with our Quality Management System, using suitably qualified and experienced personnel (SQEP) as lead reviewers supported by in-house specialists as required.

The output from an INSA is a report that details the methodology behind the review, relevant findings, and any recommendations for additional work. Rolls-Royce utilises a grading system structured to reflect the importance of identified issues of concern.



An INSA is generally required whenever a Safety Case is to be submitted to a regulator, being included as part of an initial application for a site licence or as part of an application for plant life extension. The figure below shows how the INSA fits into the programme for a site licence application.

Independent Nuclear Safety Assessment (INSA)



In undertaking an INSA, our objectives are to provide:

- An increased level of safety confidence to the nuclear regulator;
- Independent technical comment on the safety case and adequacy of hazard protection, and;
- Advice on how any of the submission material and arguments could be improved, including identification of any additional areas that it is believed the regulator would wish to see addressed in the submission.

Supporting Capabilities:

- Safety Case Authorship;
- Safety Case Management;
- HAZOP/HAZAN Studies;
- As Low As Reasonably Practicable (ALARP) studies;
- Probabilistic Safety Assessment;
- Deterministic Safety Assessment;
- Fault Tree Analysis;
- Transient Analysis.

Applications:

An INSA is generally undertaken once a safety case (or other key document) is substantially complete. Process and timing is generally determined between the INSA organisation and responsible organisation and takes account of the need to minimise project risk and potential impact on any project programme. The Rolls-Royce INSA team reviews the document(s) for:

- Clarity in purpose and scope;
- Completeness of claims and arguments;
- Existence of sufficient evidence to support the above;
- Use of accepted good practice;
- Adherence to relevant codes and standards;
- A clear plan for maintenance of the Safety Case or progress to the next stage.

0004/SO/15