Title: **Nuclear Research & Development Landscape Review**

DRAFT Date of Issue: 18/01/2023

1. **Introduction**
	1. **Background**

NIRO provides independent strategic and technical advice to Government. It works in partnership with a number of organisations to advise on the research and innovation needed for the nuclear sector to play a significant role in the UK’s future low carbon and secure energy mix while creating the environment for UK nuclear industry to contribute significantly to the UK economy. In this way it aims to inform policy, and enable maximum value for money to the UK taxpayer in all aspects of nuclear research and innovation.

* 1. **Specification Outline**

NIRO are seeking a single supplier to conduct digital surveys to ascertain total funding for nuclear R&D in the UK, including public sector contributions and an estimate of private and overseas funding for nuclear fission and fusion research. A one-year snapshot for 2021/22 financial year (April to March) will be considered. An example of a previous report produced internally has been provided to indicate the output type required.

Development of plans for nuclear in the next spending review will need a clear understanding of the current state of the UK’s nuclear infrastructure, given perceived challenges of a lack of continuous multi-year funding and the trend that has been established over the previous decade or so. Funding sources have also changed due to the impact of Brexit. Hence, NIRO seeks to undertake a review of the Nuclear R&D landscape to explore the socio and economic impacts of research and development activities across the Sector. This will form a critical part of an overall assessment of the value that government funding has on the advancement of nuclear science and innovation for the sector.

The contract contains provisions for extension to allow for further iterations for this study and future updates to the outcomes in subsequent years, subject to budgetary allowance and supplier performance.

1. **Scope**

The Nuclear R&D landscape survey aims to provide information on the Government policy landscape, funding sources, magnitude, location and focus of R&D being undertaken in the UK and the level of experience of the R&D community currently engaged in civil nuclear research. Three previous iterations have been undertaken which were published in 2020, 2017 and 2013 and are publicly available. As such it is expected that the outcomes of the 2023 survey will be comparable to previous reviews so that Government can identify trends and assess the impact of interventions.

Whilst previous iterations of the survey were undertaken in house, the nuclear R&D landscape has evolved and changed from when this survey was first undertaken and it is now recognised that there is value in seeking a third party to collect, analyse and interpret data provided from research organisations. Similarly, given the need for the data to be auditable in the future, we seek to use a digital surveying method, which may be supplemented with qualitative interviews, focus groups or similar methods to provide additional context and to gain maximum value from the exercise.

It is anticipated that the survey will be aimed at:

* 1. Organisations who have responded to previous surveys
	2. Contractors on research frameworks used by Government and NDA
	3. Universities via UK Nuclear Academics Meeting coordination
	4. Anyone else actively engaged in nuclear research

It is anticipated that a total of 150 organisations/ persons will be surveyed as part of this exercise.

The ultimate customer for this work is BEIS, (Department for Business, Energy and Industrial Strategy). However, the outcomes will provide a useful overview for UK’s researchers in academia and industry to understand further the breadth and depth of activities undertaken and is therefore likely to be used by other organisations including those that will provide data to underpin research funding proposals, business cases etc. Therefore, the end deliverable and final report will be made publicly available.

The scope of this project will include the following components:

1. Review and critique previous surveys undertaken to ascertain a basic set of questions to be answered by organisations involved in R&D.
2. Design, develop and deploy a digital survey to key stakeholders, representative across the Nuclear R&D community.
3. Assess the socioeconomic impact of R&D funding against the key differentiators used previously and any new differentiators pertinent to assessing value and impact.
4. Undertake any qualitative data collection/ verification interviews with key stakeholders to provide supplementary information, to better inform aid the conclusions drawn from this review.

The analysis of the data collected should provide NIRO with a range of metrics through which it can communicate the socioeconomic impact of Government investment in nuclear R&D. But also, the analysis should enable NIRO to convey quantifiable metrics demonstrating how it helps deliver advanced understanding and innovation to the sector and what the value and impact of such interventions have been to date.

Deliverables:

* A digital survey/ sampling methodology which meets the aims of the study (milestone 1)
* A detailed report, in non-technical language, of the study’s aims, methodology, and key findings. This should include detail on the data collation methods including the approach taken and any statistical analysis required to present the outcomes, including trend analysis from the data collected in previous assessments (Milestone 2a).
* Infographics and data visualisation of key information in a form that is engaging and easy to communicate impact from via PowerPoints or other digital presentation forms (Milestone 2b)