# **General**

### **What is the Advanced Modular Reactor Knowledge Capture (AMR KC) project**

The AMR knowledge capture project is an in-depth research project, designed to uncover historic information on AMR technology to help inform and develop future nuclear power generation. The project is designed to support the development of AMR in the UK, to help deliver the government’s target of net-zero gas emissions by 2050. It will help reduce the time, risk and cost of research and development in this field and assist UK organisations in accessing international funding.

This project is funded through DESNZ’s £385 million Advanced Nuclear Fund, and is aligned with the Net Zero Innovation Portfolio which aims to accelerate the commercialisation of innovative clean energy technologies and processes through the 2020s and 2030s.

### **What are the objectives of the of the AMR KC?**

The objective of the AMR KC is to support the development and deployment of Advanced Modular Reactors in the UK. The aims of the project are:

* To identify relevant resources and conduct knowledge capture activities to accelerate, de-risk and reduce the cost of AMR research and development.
* To enable access to knowledge, research and data in support of Advanced Nuclear Technologies (ANT) deployment.
* To maintain and develop UK capability and Knowledge of ANT and share learnings with stakeholders to support decision making.
* To Leverage UK innovation and knowledge capture investment against national and international programmes.

### **What information are you collecting and sharing?**

In phase one we are not asking stakeholders to provide or share data, but to share knowledge about what data and information they have. This will allow us to understand what data areas currently exists and where and by who this data is held.

Phase 2 is about the collation of the information and data identified in phase one and its dissemination to a diverse range of stakeholders as appropriate. The primary goal of both phases is to collect enough information to develop a ‘map of knowledge areas’. We will not be collecting or sharing data at any time.

### **What stakeholders/organisations are you looking to get information from?**

We would like to gather information from stakeholders with any experience and knowledge of Advanced Modular Reactors. Stakeholders we would like to speak with include, public and private sector organisations, operators and regulators, vendors and research organisations and academia, that operate within the nuclear sector. We anticipate that these stakeholders may hold valuable and insightful information on AMR which could benefit the future of nuclear power generation in the UK.

### **How do I get involved or find out more?**

If you would like any further information, you can contact the project team via AMRKnowledgeCapure@arup.com where a member of the team will aim to respond within three working days. More information on the project can be found at the National Nuclear Laboratory’s website, <http://www.nnl.co.uk> and search for ‘Advanced Modular Reactor Knowledge Capture’.

### **What are the benefits of sharing this information?**

Through sharing information, we will provide participants with an opportunity to influence policy, contribute to industry-wide understanding of AMR and SMR, and improve knowledge management practices within individual organisations. Stakeholders will also be able to gain an understanding of best practice and key information regarding nuclear reactors. Sharing information also provides a potential opportunity for collaboration and knowledge exchange between stakeholders that could support innovation and growth.

Knowledge sharing will contribute to improving cost and operational efficiency and delivering greater value for money for government funded RD&D programmes. A low carbon energy system will provide energy security for the UK, reducing reliance on imported gas and oil. With energy security comes cost benefits. Savings made through UK investment means that cost benefits can come through to the consumer, providing households with lower energy bills.

# **Phase one (knowledge capture)**

### **What are the objectives of the first phase of the AMR KC?**

There are nine overarching objectives for phase one of the knowledge capture project:

### To facilitate knowledge capture and dissemination which will reduce the time, risk, and cost of AMR RD&D programme delivery.

### Explore further knowledge sharing for ANT across the nuclear industry.

### To establish a map of knowledge areas, not to collect data.

### Provide UK organisations with valuable knowledge to leverage against international funding.

### Identify resources and conduct knowledge capture activities that are beneficial to the AMR RD&D programme delivery.

### Enable access to knowledge, research and data in support of ANT deployment.

### Disseminate learning with relevant stakeholders to support decision making.

### Maintain and develop UK capability and knowledge in the ANT field.

### Leverage UK innovation and knowledge capture investment against national and international programmes.

### **What level of detail are you looking to collect?**

During phase one, the focus will be on identifying what data currently exists, where it is stored and by who. The initial focus will be on broad characterisation of knowledge areas rather than granular data. ‘Knowledge areas’ are including but not limited to ‘Fuel and Core Materials’, ‘Reactor Coolant Handling and Chemistry’, ‘Reactor Operation’, and ‘Decommissioning. As the project progresses, the level of detail may increase, but this will always be done in consultation with the stakeholders.

### **Will stakeholders be allowed to comment on the structure of the database?**

We welcome stakeholders’ views and suggestions on how information is captured. If you have a suggestion, please email the project team via AMRKnowledgeCapture@arup.com.

### **What tools are you going to use to gather information?**

During phase one we will be using a range of methods to collect and store information including developing a bespoke index database applying AMR taxonomy. The database will be an interactive dashboard which can be used to add and share information. These tools can be taken forward by BEIS into phase 2, the live data base will allow us to develop a knowledge base capture on some example topics.

To gather data and information from stakeholders will we be using several methods of engagement including, webinars, interviews, and questionnaires.

# **Data storage and security**

### **How will my data be collected?**

We will be using a range of methods to collect data. We will be asking for information to be shared to an individual project mailbox, which provides a unified platform for collaboration, organisation, and retrieval of project-related data and discussions. We will also be collecting data in tailored webinars, interviews and workshops and recording this data in a secure database.

### **How and where will you be storing the information?**

Information collected in phase one of the project will be stored on Arup’s internal servers, with access limited to project members only. It is anticipated that in the second phase, information will be kept in a secure database hosted by NNL, which will be under NNL’s security policies and with data being owned by NNL.

### **How accessible will the database be?**

The database will not be publicly accessible and will only be accessed by those with the appropriate permissions, for example, those with clearance to view ‘Official Sensitive’ information. There will be a public-facing knowledge dashboard that will show stakeholders the knowledge areas that are being provided with information.

### **Will there be navigation tools for the database?**

The database will be coupled with an interactive, searchable, dashboard which can be used to share and exploit knowledge collated and eventually uncover trends in knowledge to leverage lessons of the past and avoid rework and reinvention.

### **A lot of this information is sensitive, why should I give it away?**

The aim of phase one is to create a map of knowledge areas within the sector, not to gather detailed and sensitive data. Stakeholders are not obliged to share any information if they do not wish to do so.

### **What is your data protection policy?**

We are developing a clear data management/protection plan. This will detail how any data shared will be protected and who will have access to it. We will ensure stakeholders that no proprietary or confidential information will be disclosed without appropriate safeguards. We have several policies we will adhere to such as GDPR, where we will make sure the information is handled in a way that ensures appropriate security, including protection against unlawful or unauthorised processing, access, loss, destruction, or damage.

As is standard in the nuclear sector, we will also adhere to Regulatory Information Requirements (RIR), giving us an obligation related to knowledge capture, sharing of safety-related information, and reporting on operational performance.