

# Technical Meeting on Tritium Breeding Blankets and Associated Neutronics



**IAEA**

International Atomic Energy Agency

**Tuesday 1 April 2025 - Friday 4 April 2025**

**IAEA Headquarters, Vienna, Austria**

## Scientific Programme

## **Track I: Breeding blanket design and performance**

### **a. Breeding blanket system**

- i. Neutronics performance
- ii. Thermohydraulic performance and associated challenges
- iii. Thermomechanical performance and associated challenges
- iv. Operation, instrumentation and reliability
- v. Integration within the vacuum vessel
- vi. Maintenance

### **b. Tritium extraction and removal**

- i. Extraction technology
- ii. Tritium inventory
- iii. Permeation issues
- iv. Tritium fuel cycle (including modelling and technology maturation)

### **c. Safety related aspects**

- i. Accident scenarios
- ii. Rad waste management
- iii. Radiation protection

### **d. Functional and structural materials**

### **e. Li-6 enrichment (including associated economics and regulatory issues)**

## **Track II: Manufacturing, assembly, and licensing**

### **a. Joining technologies**

### **b. Codes & standards and design rules**

### **c. Regulatory frameworks**

### **d. Economics and mass production of materials (functional and structural) and components**

## **Track III: Testing and nuclear qualification**

### **a. Requirements & related facilities**

### **b. Test results and impact on technology maturation**