

# Europe Spent Nuclear Fuel Waste Management Market Forecast to 2030 - Regional Analysis - by Reactor Type (Pressurized Water Reactor, Boiling Water Reactor, Gas-Cooled Reactor, and Others) and Disposal Type (Near Surface Disposal and Deep Surface Disposal)

<https://marketpublishers.com/r/E3CBCF7AE2FBEN.html>

Date: May 2024

Pages: 71

Price: US\$ 3,550.00 (Single User License)

ID: E3CBCF7AE2FBEN

## Abstracts

The Europe spent nuclear fuel waste management market is expected to grow from US\$ 2,273.31 million in 2022 to US\$ 1,725.69 million by 2030. It is estimated to decline at a CAGR of -3.4% from 2022 to 2030.

Ongoing Research and Innovation on Advanced Nuclear Waste Management Technologies Drives Europe Spent Nuclear Fuel Waste Management Market

Innovations in nuclear waste management can alleviate a major concern as most development projects focus on maximizing the resource base and minimizing high-level waste. Research efforts are increasingly focused on the separation of higher actinides that are long-lived and can be used in a range of new-generation reactors (fast reactors) that are expected to offer new principles in reliability and proliferation resistance. Recent developments and associated challenges demonstrate the need to gain a sound understanding of the role of advanced waste management and decommissioning in future nuclear technologies. For example, an innovative technical solution for spent nuclear fuel waste disposal is the use of deep geological repositories. Deep geological repositories are engineered facilities located deep underground, typically in stable rock formations, where high-level nuclear waste can be safely stored for extended periods. Deep geological repositories offer enhanced safety and security by isolating the radioactive waste from the biosphere. These repositories capitalize on the natural

barrier properties of the rock formations to contain and isolate the waste for years, providing a reliable, long-term solution for waste management. For example, Finland's Onkalo repository is situated in Olkiluoto and is designed to store high-level waste in granite bedrock 400m below the surface. Onkalo is a testament to the feasibility of deep geological disposal. In addition, in 2022, Sweden's Forsmark project got approval for construction of underground facility for waste management. It aims to develop a geological repository in Forsmark to house spent nuclear fuel in similar deep geological conditions safely.

## Europe Spent Nuclear Fuel Waste Management Market Overview

The Europe spent nuclear fuel waste management market analysis is categorized into France, Spain, the UK, Germany, Russia, and the Rest of Europe. Nuclear power generation in Europe accounted for 980.57 TWh in 2022. Several European countries have explored deep geological repositories as a potential solution for high-level nuclear waste disposal. Notably, Finland has made significant progress with its Onkalo repository, where spent fuel will be stored deep underground. Sweden is also working on a similar repository concept. However, these projects face ongoing regulatory and public acceptance hurdles. In the European Union, there is a push to establish a harmonized framework for managing nuclear waste, emphasizing transparency, safety, and public engagement. European nations continue to grapple with the challenge of securing and responsibly managing spent nuclear fuel waste while seeking viable long-term disposal solutions, recognizing the importance of addressing public concerns and regulatory requirements. The spent nuclear fuel waste management market in the Rest of Europe is characterized by diverse strategies, reflecting variations in nuclear energy usage, policy decisions, and regulatory frameworks. For instance, Sweden has adopted a comprehensive approach, incorporating interim storage facilities and geological repositories for long-term disposal. Belgium, on the other hand, utilizes interim storage solutions while evaluating deep geological repository options. The driving factors behind these waste management strategies are multifaceted. Energy security plays a pivotal role, with many European nations emphasizing nuclear power in their energy mix. This leads to the accumulation of spent nuclear fuel and a need for secure storage and disposal methods. Strict regulatory requirements ensure safe practices and environmental protection. Public engagement and consent-seeking are essential, as is compliance with international nuclear safety standards. Additionally, the EU's push for harmonized waste management and the need to address public concerns further influence the region's approach.

## Europe Spent Nuclear Fuel Waste Management Market Revenue and Forecast to 2030

(US\$ Million)

## Europe Spent Nuclear Fuel Waste Management Market Segmentation

The Europe spent nuclear fuel waste management market is segmented into reactor type, disposal type, and country.

Based on reactor type, the Europe spent nuclear fuel waste management market is segmented into pressurized water reactor, boiling water reactor, gas cooled reactor, and others. The pressurized water reactor segment held the largest share of the Europe spent nuclear fuel waste management market in 2022.

In terms of disposal type, the Europe spent nuclear fuel waste management market is bifurcated into deep surface disposal, and near surface disposal. The deep surface disposal segment held a larger share of the Europe spent nuclear fuel waste management market in 2022.

Based on country, the Europe spent nuclear fuel waste management market is segmented into Germany, France, Spain, Russia, the UK, and the Rest of Europe. The Rest of Europe dominated the Europe spent nuclear fuel waste management market in 2022.

Augean PLC, Perma-Fix, Svensk K?rnbr?nslehantering AB, Ansaldo Energia SPA, Veolia Environnement SA, and EnergySolutions are some of the leading companies operating in the Europe spent nuclear fuel waste management market.

## Contents

### **1. INTRODUCTION**

- 1.1 The Insight Partners Research Report Guidance
- 1.2 Market Segmentation

### **2. EXECUTIVE SUMMARY**

- 2.1 Key Insights
- 2.2 Market Attractiveness

### **3. RESEARCH METHODOLOGY**

- 3.1 Coverage
- 3.2 Secondary Research
- 3.3 Primary Research

### **4. EUROPE SPENT NUCLEAR FUEL WASTE MANAGEMENT MARKET LANDSCAPE**

- 4.1 Overview
- 4.2 Ecosystem Analysis

### **5. EUROPE SPENT NUCLEAR FUEL WASTE MANAGEMENT MARKET - KEY INDUSTRY DYNAMICS**

- 5.1 Spent Nuclear Fuel Waste Management Market - Key Industry Dynamics
- 5.2 Market Drivers
  - 5.2.1 Growing Establishment of Nuclear Power Plants
  - 5.2.2 Regulatory Framework and Safety
  - 5.2.3 Rising Use of Automation in Sorting and Segregation of Nuclear Waste Management
- 5.3 Market Restraints
  - 5.3.1 Uncertainty and Unclarity in Cost of Spent Fuel Nuclear Waste Management
- 5.4 Market Opportunities
  - 5.4.1 Ongoing Research and Innovation on Advanced Nuclear Waste Management Technologies
- 5.5 Future Trends

- 5.5.1 Key Role of Nuclear Power in Future Energy Transition
- 5.6 Impact of Drivers and Restraints:

## **6. SPENT NUCLEAR FUEL WASTE MANAGEMENT MARKET - EUROPE MARKET ANALYSIS**

6.1 Europe Spent Nuclear Fuel Waste Management Market Revenue (US\$ Million), 2020 - 2030

6.2 Europe Spent Nuclear Fuel Waste Management Market Forecast and Analysis

## **7. EUROPE SPENT NUCLEAR FUEL WASTE MANAGEMENT MARKET ANALYSIS - REACTOR TYPE**

7.1 Overview

7.1.1 Europe Spent Nuclear Fuel Waste Management Market, By Reactor Type (2022 and 2030)

7.2 Pressurized Water Reactor

7.2.1 Overview

7.2.2 Pressurized Water Reactor Market, Revenue and Forecast to 2030 (US\$ Million)

7.3 Boiling Water Reactor

7.3.1 Overview

7.3.2 Boiling Water Reactor Market, Revenue and Forecast to 2030 (US\$ Million)

7.4 Gas Cooled Reactor

7.4.1 Overview

7.4.2 Gas Cooled Reactor Market, Revenue and Forecast to 2030 (US\$ Million)

7.5 Others

7.5.1 Overview

7.5.2 Others Market, Revenue and Forecast to 2030 (US\$ Million)

## **8. EUROPE SPENT NUCLEAR FUEL WASTE MANAGEMENT MARKET ANALYSIS - DISPOSAL TYPE**

8.1 Overview

8.1.1 Spent Nuclear Fuel Waste Management Market, By Disposal Type (2022 and 2030)

8.2 Near Surface Disposal

8.2.1 Overview

8.2.2 Near Surface Disposal Market, Revenue and Forecast to 2030 (US\$ Million)

8.3 Deep Surface Disposal

8.3.1 Overview

8.3.2 Deep Surface Disposal Market, Revenue and Forecast to 2030 (US\$ Million)

## **9. EUROPE SPENT NUCLEAR FUEL WASTE MANAGEMENT MARKET - COUNTRY ANALYSIS**

9.1 Europe

9.1.1 Europe Spent Nuclear Fuel Waste Management Market Overview

9.1.2 Europe Spent Nuclear Fuel Waste Management Market, By Key Country, Revenue 2022 (US\$ Mn)

9.1.3 Europe Spent Nuclear Fuel Waste Management Market Revenue and Forecasts and Analysis - By Country

9.1.3.1 Europe Spent nuclear Fuel Waste Management Market Revenue and Forecasts and Analysis - By Country

9.1.3.2 Germany Spent Nuclear Fuel Waste Management Market Revenue and Forecasts to 2030 (US\$ Mn)

9.1.3.2.1 Germany Spent Nuclear Fuel Waste Management Market Breakdown by Reactor Type

9.1.3.2.2 Germany Spent Nuclear Fuel Waste Management Market Breakdown by Disposal Type

9.1.3.3 France Spent Nuclear Fuel Waste Management Market Revenue and Forecasts to 2030 (US\$ Mn)

9.1.3.3.1 France Spent Nuclear Fuel Waste Management Market Breakdown by Reactor Type

9.1.3.3.2 France Spent Nuclear Fuel Waste Management Market Breakdown by Disposal Type

9.1.3.4 Spain Spent Nuclear Fuel Waste Management Market Revenue and Forecasts to 2030 (US\$ Mn)

9.1.3.4.1 Spain Spent Nuclear Fuel Waste Management Market Breakdown by Reactor Type

9.1.3.4.2 Spain Spent Nuclear Fuel Waste Management Market Breakdown by Disposal Type

9.1.3.5 Russia Spent Nuclear Fuel Waste Management Market Revenue and Forecasts to 2030 (US\$ Mn)

9.1.3.5.1 Russia Spent Nuclear Fuel Waste Management Market Breakdown by Reactor Type

9.1.3.5.2 Russia Spent Nuclear Fuel Waste Management Market Breakdown by Disposal Type

9.1.3.6 UK Spent Nuclear Fuel Waste Management Market Revenue and Forecasts

to 2030 (US\$ Mn)

9.1.3.6.1 UK Spent Nuclear Fuel Waste Management Market Breakdown by Reactor Type

9.1.3.6.2 UK Spent Nuclear Fuel Waste Management Market Breakdown by Disposal Type

9.1.3.7 Rest of Europe Spent Nuclear Fuel Waste Management Market Revenue and Forecasts to 2030 (US\$ Mn)

9.1.3.7.1 Rest of Europe Spent Nuclear Fuel Waste Management Market Breakdown by Reactor Type

9.1.3.7.2 Rest of Europe Spent Nuclear Fuel Waste Management Market Breakdown by Disposal Type

## **10. INDUSTRY LANDSCAPE**

10.1 Overview

10.2 Market Initiative

10.3 Merger and Acquisition

## **11. COMPANY PROFILES**

11.1 Augean PLC

11.1.1 Key Facts

11.1.2 Business Description

11.1.3 Products and Services

11.1.4 Financial Overview

11.1.5 SWOT Analysis

11.1.6 Key Developments

11.2 Perma-Fix

11.2.1 Key Facts

11.2.2 Business Description

11.2.3 Products and Services

11.2.4 Financial Overview

11.2.5 SWOT Analysis

11.2.6 Key Developments

11.3 Svensk Krnbrnslehantering AB

11.3.1 Key Facts

11.3.2 Business Description

11.3.3 Products and Services

11.3.4 Financial Overview

- 11.3.5 SWOT Analysis
- 11.3.6 Key Developments
- 11.4 Ansaldo Energia SPA
  - 11.4.1 Key Facts
  - 11.4.2 Business Description
  - 11.4.3 Products and Services
  - 11.4.4 Financial Overview
  - 11.4.5 SWOT Analysis
  - 11.4.6 Key Developments
- 11.5 Veolia Environnement SA
  - 11.5.1 Key Facts
  - 11.5.2 Business Description
  - 11.5.3 Products and Services
  - 11.5.4 Financial Overview
  - 11.5.5 SWOT Analysis
  - 11.5.6 Key Developments
- 11.6 EnergySolutions
  - 11.6.1 Key Facts
  - 11.6.2 Business Description
  - 11.6.3 Products and Services
  - 11.6.4 Financial Overview
  - 11.6.5 SWOT Analysis
  - 11.6.6 Key Developments

## **12. APPENDIX**

- 12.1 About the Insight Partners
- 12.2 Word Index



## I would like to order

Product name: Europe Spent Nuclear Fuel Waste Management Market Forecast to 2030 - Regional Analysis - by Reactor Type (Pressurized Water Reactor, Boiling Water Reactor, Gas-Cooled Reactor, and Others) and Disposal Type (Near Surface Disposal and Deep Surface Disposal)

Product link: <https://marketpublishers.com/r/E3CBCF7AE2FBEN.html>

Price: US\$ 3,550.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/E3CBCF7AE2FBEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below  
and fax the completed form to +44 20 7900 3970