



NMNTI **CARBON MANAGEMENT** **REDUCTION PLAN** **2019 -2025**

Net Zero Target by 2050

New Millennium Nuclear Technologies

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REPUBLIC PLAZA



NMNTI CARBON MANAGEMENT REDUCTION PLAN (CRP) 2019 - 2025

Commitment to Achieving the Government's Net Zero 2050 Target Goal

CRP Summary

New Millennium Nuclear Technologies International (NMNTI) is entirely focused and committed to realising the Government's target of 'Net zero' by 2050. Accordingly, *NMNTI* is implementing actions to reduce our Greenhouse Gas emissions (GHG). *NMNTI* seek to hone their GHG reduction focus towards this by reducing annual scope 1 and 2 GHG emissions by 20.0% by 2025 and by 55% by 2035 from this 2019 base year emissions report. From this 2019 baseline, emission targets were established with a uniform direct reduction methodology, equal to a minimum of 5% annual carbon emissions reduction spanning a thirty-one-year period to accomplish the Net Zero target goal by 2050. The five-year period 2020 to 2025 establishes the time for our Carbon Reduction Plan (CRP) and lays out *NMNTI'S* method to accomplish our provisional carbon reduction target. Estimates for individual scope 3 emissions categories for *NMNTI* are summarised to identify the main areas of supply chain emissions to prioritise data acquisition and obtain a more thorough GHG inventory. A long-term carbon reduction target for 2035 frames the direction of travel and allows for developing our longer-term carbon reduction strategy 1 and 2 GHG emissions by 20% by 2024 and 55% by 2035 from their 2019 base year.

NMNTI'S initial baseline year 2019 evaluation of our GHG inventory for scope 1 and 2 emissions are provided below, representing **21.825 tCO₂e** in the 2019 calendar year. *NMNTI* follows the principles of the GHG Protocol Corporate Accounting and Reporting Standard to calculate Scope 1, 2 and 3 emissions from our worldwide,



international nuclear characterisation operations. *NMNTI* is vigorously pursuing and taking effective measures to reduce our GHG emissions. Please be aware that the *NMNTI*'s Net Zero Carbon operation by 2030 target includes green science and technology-orientated initiatives for scope one and scope two. *NMNTI* has a separate operational pledge to maintain travel-related carbon emissions Scope 3 (business-based) below 50% of our baseline year, including teleconferencing, commuting and business travel.

NMNTI provides an emissions report for 2022 which is evaluated against the 2019 baseline figures.

Introduction

NMNTI is a nuclear characterisation business located in Lakewood, Colorado. We simplify and make it look easy to move Nuclear Reactors and Nuclear Sites toward Decommissioning, Final Status Survey and Delicensing to green field status with all the radioactive waste accounted for and properly and responsibly characterised, leaving no contamination legacy for tomorrow's generations. We have a team of professionals with a long history of successful expertise in nuclear facility characterisation and environmental engineering services, including management, decontamination & decommissioning of nuclear facilities. *NMNTI*'s Quality Program is based on ISO9001:2015 registration, and we believe in a brighter, cleaner future by responsible and committed steps now.

NMNTI has profiled and helped decommission and dismantle 12 nuclear reactors, SONGS Units-1, 2&3, San Onofre, California, Omega West Reactor Los Alamos National Laboratory, New Mexico, the TRIGA University of Illinois Research Reactor, ENRESA Vandellós Unit 1 graphite-gas N.P.P. Spain, Jose Cabrera Reactor, Spain, HIFAR reactor, ANSTO – Australia, NPD Reactor – CNL, Rolphton Canada and numerous US Department of Energy highly contaminated facilities and Fort Calhoun, Omaha, Nebraska and also Kewaunee nuclear power plant, Two Rivers, Wisconsin. *NMNTI* has also successfully profiled, characterised, and helped dismantle nuclear facilities and performed the final status survey. *NMNTI* played an integral part in the decommissioning plans, nuclear site decommissioning strategy development of



Brennilis STE for ELECTRICITE de FRANCE-CIDEN (EDF) and investigations of EDF Bugey 1 Characterisation and Chinon A2 all used graphite. Representative subsurface sampling, gamma radiochemical characterisation, and profiling at depth using *TruPro*[®].

NMNTI's personnel possess a wide range of experience, particularly in environmental, nuclear, and chemical disciplines. *NMNTI*'s personnel are active in all project stages: laboratory and pilot plant R&D; sampling and characterisation of structures; conceptual facility formulation; preliminary design; permitting; detailed equipment design and specification; and overall project management. *NMNTI* is an independent supplier of consultancy services, contract services, and contract personnel to the nuclear industry specialising in Radwaste management and decommissioning. *NMNTI* is at the cutting edge of the development and application of sampling, characterisation, and decontamination technologies for the radioactive waste and nuclear industries and has many years of experience in providing customer satisfaction. With experience in operating sampling and characterisation instrumentation in conjunction with decontamination plant, *NMNTI* offers a comprehensive equipment design, supply, installation, and commissioning and hire service for decommissioning and radioactive waste treatment.

NMNTI Radwaste Management & Decommissioning team specialises in establishing optimum process conditions for a wide variety of bulk materials in controlled environments where decontamination and decommissioning processes need to be optimised for cost and time efficiency. *NMNTI* has provided sampling & characterisation, representative sample and data production, activity profiling, waste volume estimation, technical reports, and environmental engineering products and services to the USDOE, our international nuclear client base, since 2001. Not only do we offer site-specific products and services, in addition, but we also provide custom-engineered, turnkey solutions tailored to project-specific requirements too.

NMNTI is at the forefront of international decommissioning provider of upfront characterisation of nuclear power reactors and nuclear facilities in testing, inspection, and radioactive waste acceptance criteria compliance products and services.



NMNTI is a nuclear characterisation business located in Lakewood, Colorado. It has a team of professionals with a long history of successful expertise in nuclear facility characterisation and environmental engineering services, including management, decontamination & decommissioning of nuclear facilities. *NMNTI's* Quality Program is based on ISO9001:2015 registration and follows and adheres to ISO14001 with environmental policy.

NMNTI's professionals have the technical and business skills to satisfy the requirements of the client economically, regardless of the size or complexity of the project. *NMNTI's* personnel possess a wide range of experience, particularly in environmental, nuclear, and chemical disciplines. *NMNTI's* personnel are active in all project stages: laboratory and pilot plant R&D; sampling and characterisation of structures; conceptual facility formulation; preliminary design; permitting; detailed equipment design and specification; and overall project management. *NMNTI* is an independent supplier of consultancy services, contract services, and contract personnel to the nuclear industry specialising in Radwaste management and decommissioning. *NMNTI* is at the cutting edge of the development and application of sampling, characterisation, and decontamination technologies for the radioactive waste and nuclear industries and has many years of experience in providing customer satisfaction. With experience in operating sampling and characterisation instrumentation in conjunction with decontamination plant, *NMNTI* offers a comprehensive equipment design, supply, installation, and commissioning and hire service for decommissioning and radioactive waste treatment.

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NMNTI offers turnkey service and is structured to execute projects consistent with the client's schedule and budget while maintaining strict observance of safety and all applicable codes and regulations. NMNTI is an independent supplier of services to the nuclear industry specialising in Decommissioning and Decontamination, Sampling and characterisation using *TruPro*[®] Technology, Radioactive Waste Package Characterisation and Analytical Data Validation. NMNTI's ongoing nuclear operations do not impact the environment but enhance the characterisation and elimination of nuclear site unknowns and are committed to reducing the international nuclear footprint toward final site survey and delicensing approaches minimising radwaste volumes enhancing decommissioning and radwaste strategy for the best interests of the people and planet.

International Regulatory Strategy

The current climatology belief of "climate-science" is based upon the Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change. The Synthesis Report of the IPCC Sixth Assessment (AR6) https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf shows incontrovertible proof that human activity, along with increased solar activity, is warming the oceans and the planet. The global average temperature is 1.09°C above average for the climate data set utilised and compared for the last decade when contrasted to pre-industrial levels, and when data by humans was first collected and has resulted in acidification of the oceans, melting of glaciers and alterations to global weather patterns. Climate model pathways show that to avoid overheating at the current 1.5 °C decade increase, global human-caused CO₂ emissions ought to decrease 45% from 2010 levels by 2030, thus, to realise the ambitious but paramount human goal of net zero by 2050.

UK Climate Change Act 2008 (as amended 2019)

The **UK Climate Change Act** of 2008 determined legally binding carbon reduction targets of 34% by 2020 and 80% by 2050 compared to a 1990 baseline over various carbon budgets. The sixth carbon budget (for period 2033 to 2037) brings a 78% reduction by 2035 into law. Following the Paris Agreement, a change in 2019 has seen



the UK Government implement a 'Net Zero' 2050 approach. Businesses must conform to forthcoming regulatory and financial pressures and align their business carbon reduction management strategies with UK national targets. Implementing a clear carbon reduction strategy and sustainability reporting is fundamental to potential business advancement and expansion by optimising the business supply chains and growing sustainable development to a competitive advantage.

Enhancing Sustainable Development Towards a Greener Organisational Standing

NMNT International Inc. is a trailblazer in the upfront characterisation of nuclear reactor decommissioning, nuclear waste characterisation and radwaste management toward complying with National Radiological Compliance and Radioactive Waste Acceptance Criteria and has attained and developed a wide spectrum of technical knowledge through our staff and services for the provision of technologies and turnkey solutions to satisfy *NMNTI's* international nuclear clients' decommissioning and radwaste challenges completely. *NMNTI* has a clear prime position on the international stage in championing and contributing towards the global sustainable development and protection of the environment and is at the forefront at the initiation of nuclear decommissioning projects to work in partnership with our international nuclear clients, international universities, their employees, subcontractors, service and product suppliers, and local communities to transform and develop towards low carbon goods and services. *NMNTI's* activities should be modelled on good carbon management and best practice to maximise standards of respect for the environment. Vehicles account for 80% of *NMNTI's* carbon footprint of the baseline year 2019, so decarbonising must be incorporated into our CMS strategy over the coming years whilst investing in green technology to support the attainment of *NMNTI's* CRP.

Corporate Profile & UN Sustainable Development Goals

In May 2019 *NMNTI* published the updated Company Philosophy that included an assurance to '...the protection of the environment and to sustainable development' by 'rational and sustainable use of energy and 'reduction in greenhouse gas emissions'. This is transposed into the CSR strategy as one of the three main commitments - 'A



More Sustainable World'. The Establishment of a carbon management plan furthers the realisation of this strategy and is aligned with the UN's SDG's to ensure execution of climate action & access to clean energy.

Environmental Management System Performance Monitoring

NMNTI operates an Environmental Management System (EMS) that complies with ISO14001 and is central to all attributes of the *NMNTI* business. The Environmental Management System provides a framework to measure and monitor our environmental performance (including energy, carbon, and waste) via key performance indicators (KPI) and aims to establish clearly measurable goals and targets. The EMS is audited every year by implementing our internal audit programme Ensuring constant improvement to get better all of the time.

Emissions Baseline Assessment

A baseline assessment of *NMNTI's* GHG Inventory is established for Scope 1 and 2 emissions for the 2019 calendar year. Initial estimates of screening outputs for certain scope 3 categories are presented.

New Millennium Nuclear Technologies International, Incorporated (NMNTI) is committed to achieving Net Zero emissions by 2050 (Scope 1 and Scope 2). An initial baseline assessment of *NMNTI's* Greenhouse Gas (GHG) inventory for scope 1 and 2 emissions are provided for 2019 below, accounting for **21.825 tCO₂e** in the 2019 calendar year. *NMNTI* follows the principles of the GHG Protocol Corporate Accounting and Reporting Standard to calculate Scope 1, 2 and 3 emissions from our worldwide, international nuclear characterisation operations. *NMNTI* is vigorously pursuing and taking effective measures to reduce our Greenhouse Gas emissions. Please be aware that the *NMNTI's* Net Zero Carbon operation by 2030 target includes green science and technology-orientated initiatives for scope one and scope two (business-based). *NMNTI* has a separate operational pledge to maintain travel-related carbon emissions (Scope 3) below 50% of our baseline year, including commuting and business travel. An annual emissions report for the 2019 calendar year is the 2019 baseline calculated scope 1 and scope 2 emission figures for 2019 is provided below. *NMNTI's* goal to reducing annual scope 1 and 2 Greenhouse Gas emissions by 20.0%



by 2025, and by 55% by 2035 from this 2019 base year emissions report. From this 2019 baseline, emission targets are set with a uniform direct reduction methodology, equal to a minimum of 5% annual carbon emissions reduction spanning a thirty-year period to accomplish the Net Zero target goal by 2050. The five-year period 2020 to 2025 establishes the time span for our carbon reduction plan and lays out **NMNTI's** scheme to accomplish our provisional carbon reduction target.

Publication date: 5th May 2019

NMNTI EMISSIONS FOOTPRINT 2018 to 2019

The **NMNTI** baseline 2019 emissions Scope 1 and Scope 2 is a record of the greenhouse gases that were produced in the 2018 to 2019 reporting period and were produced prior to the introduction of any strategies to reduce **NMNTI's** emissions. **NMNTI's** 2019 baseline emissions are the reference point against which emissions reduction targets and goals are measured for 2019.

Baseline year emissions: 2018/19 (May to April)	
EMISSIONS	TOTAL (tCO₂e)
Scope 1	21.800
Scope 2	0.025 (market based)
Scope 3 (Included Sources)	Not calculated or reported Scope 3 emissions as relates to NMNTI business travel and NMNTI commuting undertaken by staff and colleagues, emissions from company staff and colleagues working from home, operational waste and the extraction and distribution of all emissions sources.
Total Emissions	21.825 tCO₂e

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard and uses the appropriate Government emission conversion factors for greenhouse gas company reporting.

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard.

This Carbon Reduction Plan has been reviewed and signed off by the Managing Director (or equivalent management body).

Signed on behalf of the Supplier:

A handwritten signature in black ink is written over a dark red rectangular redaction box. The signature is cursive and appears to read 'Grant Charters'. The redaction box is positioned over the name of the signatory.

Grant Charters

Managing Director, *NMNTI* Business Date: 6th May 2019