

NIER

SOLUTIONS FOR GLOBAL CHALLENGES



**UNIVERSITY OF
NEWCASTLE**
AUSTRALIA

nier

SOLUTIONS FOR GLOBAL CHALLENGES
ENERGY RESOURCES FOOD WATER

NEWCASTLE.EDU.AU/NIER



WHAT WE OFFER

WORLD-CLASS RESEARCH

We facilitate multidisciplinary problem solving and access to large-scale specialised research infrastructure to mobilise market-ready solutions.

INDUSTRY COLLABORATION

As the vital link between academia and industry, we activate collaboration and collective capacity to underpin research translation.

RESEARCH EDUCATION

We are focused on delivering research education and training to meet workforce needs of future industries.

INNOVATIVE SOLUTIONS

We drive technology transfer and impact at scale to improve social, economic, and environmental outcomes for sectors of global significance.

RESEARCH CAPABILITY AREAS



POWERING THE FUTURE

Unlocking new energy solutions, new economies, and a net zero future through innovative technologies, materials, and fuels.



NEXT GENERATION RESOURCES

Meeting the resource needs of the future through sustainable innovations that support our minerals, metals, food, and water sectors.



ENVIRONMENTAL SUSTAINABILITY & SECURITY

Balancing environmental, economic, and social priorities to protect regional resilience, sustainability, and prosperity.

OUR OBJECTIVE

At NIER, we believe global challenges require regional solutions. Our objective is to strengthen regional resilience through the delivery of sustainable solutions for global challenges related to energy, food and water security, and resource sustainability through collaborative research, translation, and education.

THE NIER PRECINCT

Located at the University of Newcastle's Callaghan campus, NIER is a 3.8 hectare industrial innovation precinct. Extensive research laboratories, glasshouses, and pilot-scale workshops offer unique opportunities for industry focused applied research, demonstration, and training.



INDUSTRY ENGAGED RESEARCH COLLABORATIONS



SUPPORTING SECTORS OF NATIONAL SIGNIFICANCE

ENERGY, RESOURCES, FOOD, AND WATER



INDUSTRY EMBEDDED DOCTORAL TRAINING CENTRES



Fold out to see the breadth of NIER's sustainable footprint.

SUSTAINABLE SOLUTIONS

CARBON CAPTURE AND UTILISATION

LOW EMISSIONS TECHNOLOGIES

RENEWABLE ENERGY SYSTEMS AND STORAGE

CLIMATE RESILIENCE AND SUSTAINABILITY

SUSTAINABLE FUELS

LOW CARBON STEELMAKING

ADVANCED MATERIALS FOR INDUSTRIAL INNOVATION

SUSTAINABLE HYDROGEN PRODUCTION

SKILLED WORKERS FOR THE FUTURE

BULK MATERIALS HANDLING AND TRANSPORT

ECO-EFFICIENT MINERAL PROCESSING

FOOD & WATER SECURITY

PARTNERSHIP NETWORKS

WATER CAPTURE, REUSE AND RECYCLING

COASTAL AND CATCHMENT WATER MANAGEMENT

GEOTECHNICAL ANALYSIS

ENVIRONMENTAL REMEDIATION OF LAND AND WATER

WASTE TO RESOURCES IN AGRIBUSINESS INNOVATION

BIO FUELS AND GREEN CHEMICALS

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