

# National Battery Research Institute

Powering Indonesia's **Battery Revolution**

Supported by



Queen Mary  
University of London



45001 : 2018



14001 : 2015



9001 : 2015

# Forewords

NBRI is Indonesia's leading independent institute for electrochemical energy storage science and technology. NBRI covers research & development, training & education, testing & standardization, international conference, expo, social impact, and publishing. NBRI aims to contribute to the overall issue on battery technology from upstream to downstream, as well as renewable energy. Reflecting to above concern, NBRI completely supports Sustainable Development Goal Agenda, Paris Agreement, and Indonesian government program for implementing clean energy transition through Renewable Energy (RE) and Electric Vehicles (EV).

NBRI is a platform that brings together scientists, academicians, industry partners, the government, and all stakeholders that focus on battery technology and renewable energy. Our priority is to encourage and support the battery manufacturing industry using local resources and provide competent resources in the field of Battery technology for EV and RE. It will enable Indonesia to be independent in energy. For attaining our goals, we open to collaborate with stakeholders for accommodating various views and suggestions from our partners to always be the best.



**Prof. Dr. rer. nat.  
Evvy Kartini**

Founder



We believe on the impact that we have done for society and environment would **create a positive difference.**



**Prof. Alan  
J. Drew**

Co-Founder

# About Us

The NBRI was supported by the UK Government's Global Challenge Research Fund (GCRF), and Queen Mary University London. Since January 2020, NBRI has performed more than 240 activities national and internationally covering 35 countries. Those activities include Focus Group Discussion, Lectures, Schools, Workshops, Webinars and also annual International Conferences.

NBRI was the delivery partner of an Indonesia-UK Climate Change Workshop funded by the British Council. NBRI was legally established on 07th December 2020 as The Center of Excellence Innovation of Battery and Renewable Energy Foundation, with Prof. Dr. Evvy Kartini and Prof. Dr. Alan J. Drew, becoming the Founder and Co-founder of NBRI, respectively. This will enable us to build on our successes in 2023 and carry out our future vision, which is to enable and support Indonesia to become world-leading in battery education, research, innovation, and manufacture, resulting in the capacity and technology within the Indonesian industry to build a new market for Indonesian manufactured batteries using locally extracted mineral resources.

# Vision

Our vision for the NBRI is to gather all Indonesian stakeholders in battery research and production, to help form strong national batteries research and increase the visibility of batteries research at the government level.

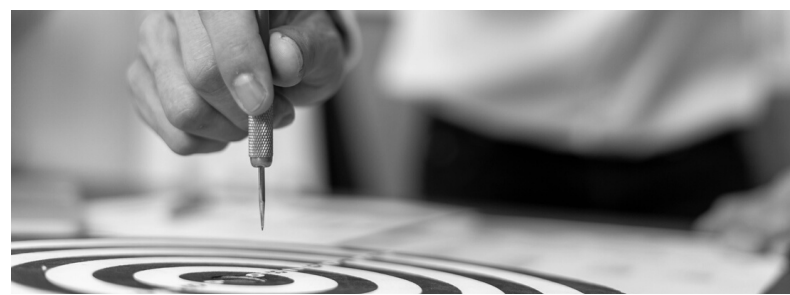
# Mission

## 1

Assisting Indonesia to develop a batteries manufacturing industry ecosystem using locally mineral resources

## 2

Supporting Indonesia to be an independent in energy.



# Our Team



**Prof. Dr. rer. nat.  
Evvy Kartini**

Founder of NBRI



**Prof. Alan  
J. Drew**

Co-Founder NBRI



**Muhammad  
Firmansyah S.E.**

Program Director



**Moh. Wahyu  
Syafi'ul, S.Si**

Manager of  
Education and  
Training



**Muhammad  
Fakhrudin, S.T.**

Assistant Manager  
Research, Development  
and Innovation



**Baihaqi  
Muhammad, S.Si**

Corporate  
Engagement



**Sigit Aryo  
Kristianto, S.Si**

Battery Testing  
and Standardization  
Supervisor



**Shafira  
Ramadhani, S.Ars**

Manager of  
Creative Design



**Henih  
Anggraeni**

Accounting  
and Tax Staff



**Raychan Abyqa  
Fahriza, S.Si**

Renewable Energy,  
Electric Vehicles  
and Energy Storage  
Engineer



# Demographic



More than  
**35 Countries**

Indonesia, Australia, Singapore, India, Brazil, Poland, Portugal, United Kingdom, Algeria, United States of America, Canada, Japan, South Korea, Thailand, Belgium, Norway, Bangladesh, Brazil, China, Ghana, Iraq, Malaysia, Morocco, Nigeria, Pakistan, Philippines, Russia, Rwanda, Taiwan, Tunisia, Turkey, French, Hongkong, Egypt, Vietnam



More than  
**11.114 Participants**



More than  
**792 Institutions**



More than  
**46 Delivered Projects & 200 Activities**



More than  
**4.5 out of 5 (Satisfaction Score)**

# What We Offer

We have several departments  
that offer various services.

- 
- 01** Research, Development and Innovation
  - 02** Education, Training and Certification
  - 03** Battery Testing and Standardization
  - 04** Renewable Energy, Electric Vehicles and Energy Storage
  - 05** Event Organizer and Exhibitor
  - 06** Publisher (JBREV and NBRI Press)
  - 07** Social Impact
  - 08** Consultation

# Spotlight Activities

2021-2022



## NATIONAL RESEARCH PRIORITY

NBRI has successfully delivered research project on developing battery technology from locally mineral resources



## SKKNI ON BATTERY PACK

As a working group leader, NBRI along with Ministry of Manpower has ratified a National Work Competency Standard (SKKNI) on Battery Pack



## PT KOMATSU INDONESIA ELECTRIFICATION

For supporting energy transition, NBRI assists PT. Komatsu Indonesia to conduct electrification on their industrial ecosystem



## CLIMATE CHALLENGE WORKSHOP

NBRI in collaboration with Queen Mary University of London has delivered research prize for researcher to solve climate change issue that was funded by British Council



## CLIMBING UP THE INDONESIA NICKEL VALUE CHAIN

NBRI signs the Memorandum of Understanding (MoU) with Association of Indonesia Nickel Miners (APNI)



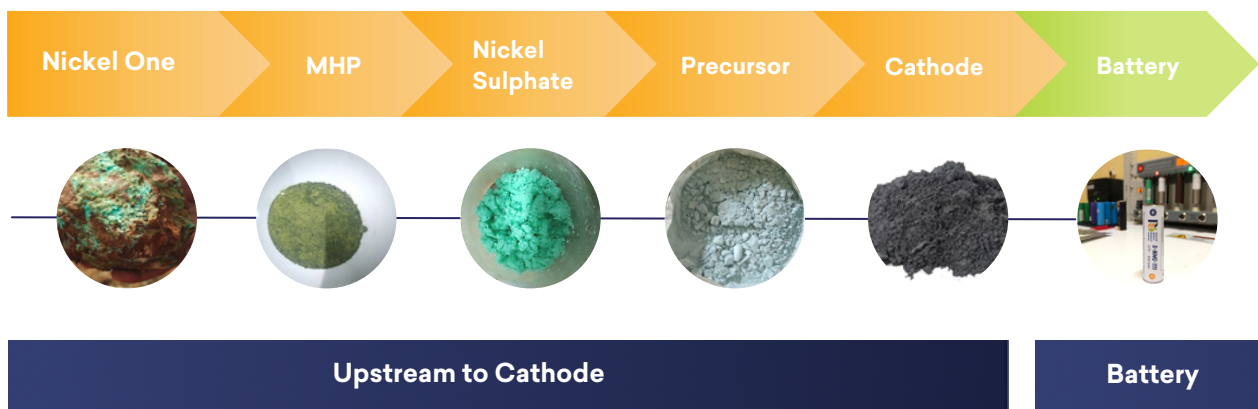
## ESPOUSING NATIONAL & INTERNATIONAL BATTERY STANDARDIZATION

NBRI signs the Memorandum of Understanding (MoU) with Underwriters Laboratories (UL) Solutions of Indonesia

# Research Development and Innovation

## Levelling Up Nickel Ore

FROM NICKEL TO BATTERY



## Our Services

WHAT WE OFFER



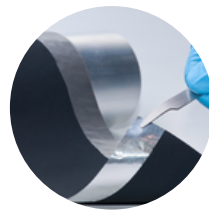
### Mineral extraction

Ore extraction for battery materials



### Custom Battery Materials Development

Precursor, cathode & anode active materials



### Electrode Sheet Development

Electrode Sheet Development



### Battery Cell Fabrication

Coin & cylinder cell assembly



### Battery Pack Assembly

Development of innovative battery packs with BMS



### Direct Consultation

Consultation regarding business model, etc.

2  
PATENTS

42  
CONSULTATIONS

12  
PROJECTS

36  
PUBLICATIONS



# Event Highlights

## Webinars



## Focus Group Discussions



## International Conferences & Meetings



## Exhibitors





# Education and Training

## ANNUAL PROGRAMS



### International Battery School

24-25 MAY 2022

Satisfaction Score 4.6/5

30 Participants

Facilitating participant to have a basic understanding about battery technology and its current issue



### International Workshop on Solar PV Technology

2-3 AUGUST 2022

Satisfaction Score 4.2/5

14 Participants

Two days intensive workshop on Solar PV technology for providing an insight both theoretical and practical



### International Workshop on Material and Advanced Characterizations

24-25 NOVEMBER 2022

Satisfaction Score 4.6/5

30 Participants

Organizing international workshop on material and its characterization for students, researchers, and industries



### Training of Trainers

14-15 DECEMBER 2022

Satisfaction Score 4.5/5

27 Participants

Two days intensive training for trainers to obtain useful knowledge about battery technology from upstream to downstream

# Education and Training

## INTERNSHIP PROGRAM

Total Internship

Interns: 26

Institutions: 12



# Battery Testing and Standardization

## Our Services

### BATTERY TESTING & STANDARDIZATION FACILITIES



#### Battery Testing Facilities

We are the testing facilities to ensure all the battery product are tested and safe according to international standards



#### Consultation

We are consultant in Lithium Battery field for fulfill consumer energy storage needs in Renewable Energy and Electric Vehicle



#### Inspection

We offer the inspection services for energy storage application that already complying with international standards

## Products and Clients



#### Pouch Cell Testing

Client: Supernova Flexible Packaging



#### Inspection & Study on VRLA Battery

Client: TML Energy



#### Battery Pack Testing & Standardization

Client: PT. Pindad



#### Battery Pack Testing & Certification Training

Client: PT. PLN



#### Battery Pack Testing & Standardization for EV

Client: Indonesia Battery Corporation



#### Battery conversion from Lead Acid to Lithium ion Batteries for Pallet Mover

Client: PT. Komatsu Indonesia

# Publisher



Journal of **Batteries** for **Renewable Energy** and **Electric Vehicle**

JBREV is established in 2022 by the National Battery Research Institute (NBRI) in collaboration with the Queen Mary University of London, Material Research Society Indonesia (MRS-INA), and International Union of Material Research Societies (IUMRS). The JBREV is devoted to publish new and original research, article review related to battery materials, science & engineering that applicable to renewable energy and electric vehicles.



NBRI Press or "Penerbit Yayasan Pusat Unggulan Inovasi Baterai dan Energi Terbarukan" is a publishing house under National Battery Research Institute. NBRI Press publishes JBREV, scientific & popular book, module and handbook focusing on battery technology, renewable energy and electric vehicles. NBRI Press also covers various topics as long as it is beneficial for society.

## 4

### PROCEEDINGS

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## 142

### PROCESSED MANUSCRIPTS

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FURTHER INFO:







## Social Impact Project

NBRI Social Impact is a social project to help communities and increase their productivity through appropriate technology, especially batteries and renewable energy, as well as community capacity building.

FURTHER INFO:



### Project Location

Patia Village, Patia District, Pandeglang Regency, Banten Province

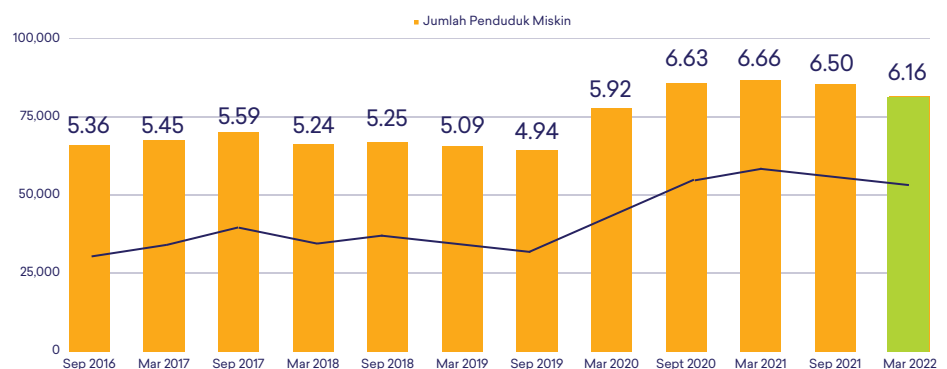
### Aim

Increasing agricultural efficiency. Currently, more than 50% Patia's rice field is using non-irrigation system.

### Poverty Profile

Banten, Maret 2022

Pandeglang Regency, particularly on Patia District has the highest poverty numbers in Banten Province.



### Scheme



#### Corporate CSR

Support through corporate CSR funds will further accelerate impact and help more people.



#### Crowdfunding

Every donated penny is very meaningful for the Social Impact project



# Partnership

## PARTNERS



## Contact Us



[nbri.indonesia](https://www.instagram.com/nbri.indonesia)



[www.n-bri.org](http://www.n-bri.org)



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Research Institute



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