



## Minister for Energy and Resources

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# Energy and Resources Portfolio

## Vote Business, Science and Innovation

Report in relation to selected non-departmental appropriations for the year ended 30 June 2021

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## Foreword

Ministers are responsible for reporting the financial and non-financial performance of non-departmental appropriations to Parliament. This report provides information about the year-end performance results of non-departmental appropriations that have not been included in any other reports to Parliament.

This report provides the 1 July 2020–30 June 2021 results of relevant non-departmental appropriations for the Energy and Resources portfolio within Vote Business, Science and Innovation. The relevant appropriations are:

- Energy and Resources: Management of IEA Oil Stocks
- Energy and Resources: National New-Energy Development Centre
- Energy and Resources: Oil Field Decommissioning
- Energy and Resources: Advice on Viable Energy Storage Projects (MYA)
- Energy and Resources: Energy Solutions for Public and Māori Housing
- Energy and Resources: Crown Energy Efficiency – Capital Injection
- Energy and Resources: Meeting Crown Obligations



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Hon Dr Megan Woods

**Minister of Energy and Resources**

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## Statements of Performance

### *Non-Departmental Output Expenses*

#### **Energy and Resources: Management of IEA Oil Stocks (MYA) (M28)**

##### **Scope of Appropriation**

This appropriation is limited to purchasing, managing and investigating oil tickets (forward purchase contracts for oil supply) and other related oil security products needed to meet International Energy Agency obligations.

##### **Intention Statement**

This appropriation is intended to achieve New Zealand meeting its 90 day oil stock holding obligation as a member of the International Energy Agency (IEA).

##### **Assessment of Performance**

###### **Non-Financial**

<b>Performance Measure</b>	<b>2019/20 Supplementary Standard</b>	<b>2020/21 Total Standard</b>	<b>2020/21 Actual Standard</b>
New Zealand meets its International Energy Agency obligations by maintaining 90 days of oil stock reserve	Achieved	Achieved	Achieved

###### **Comment**

New Zealand held an average of 94.2 days of oil stock reserves over 2020/21, with no months falling below 90 days during this time.

###### **Financial**

<b>Expenses (\$000)</b>	<b>2020/21 Estimates</b>	<b>2020/21 Supplementary Estimates</b>	<b>2020/21 Actual</b>
Total Appropriation	26,000	26,416	10,659

###### **Comment**

The appropriation increased during financial year 2020/21 which was due to the carry forward of a small prior year underspend.

This appropriation funds the purchase of oil stock options so New Zealand can meet its obligations to the International Energy Agency, where sufficient stock to cover at least 90 days of net import demand must be held. The expenses in this appropriation can be volatile as costs are dependent on global oil prices and volumes which need to be held.

The expense in 2020/21 was significantly lower than prior years due to COVID-19's impact on oil prices and volume requirements (for example in the aviation sector). The appropriation is a multi-year appropriation to address volatility in costs, allowing the underspend in 2020/21 to be available in future years.

## Energy and Resources: Oil Field Decommissioning

### Scope of Appropriation

This appropriation is limited to the costs associated with the demobilisation and decommissioning of New Zealand oil fields.

### Intention Statement

This appropriation is intended to achieve the demobilisation and decommissioning of New Zealand oil fields.

### Assessment of Performance

#### Non-Financial

Performance Measure	2020/21 Supplementary Standard	2020/21 Total Standard	2020/21 Actual Standard
Crown complies with regulatory requirements as operator of an offshore installation	New measure	Achieved	Achieved
MBIE enters into a contract with a supplier to demobilise the Floating production storage and offloading (FPSO) Umuroa	New measure	Achieved	Achieved
The supplier commences the disconnection of the Floating production storage and offloading (FPSO) from the Tui oil field	New measure	Achieved	Achieved

#### Comment

The demobilisation of the floating production storage and offloading from the Tui Oil Field commenced in January 2021 and was completed in May 2021.

#### Financial

Expenses (\$000)	2020/21 Estimates	2020/21 Supplementary Estimates	2020/21 Actual
Total Appropriation	-	195,633	175,410

#### Comment

In Budget 2021 additional funding to complete the decommissioning of the Tui Oil Field was appropriated into 2020/21. The majority of the funds have been expensed to increase the provision, from which costs related to the decommissioning are met. This expense is based on the best information available at 30 June 2021 and includes several assumptions, including the technical solution used for upcoming phases.

Actual costs incurred against the provision are expected to be dependent on availability of vessels, the time period in which work can be completed and suitable technical solutions.

## Energy and Resources: Advice on viable energy Storage projects (MYA)

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### Scope of Appropriation

This appropriation is limited to the delivery of advice on the technical, environmental, and commercial feasibility of viable energy storage projects, including an assessment against alternatives.

### Intention Statement

This appropriation is intended to achieve the funding of the business case assessment of options to address New Zealand's dry year energy storage problem in sufficient detail for a Cabinet decision on the selection of a project to be developed into a final engineering design for approval.

### Assessment of Performance

#### Non-Financial

Performance Measure	2019/20 Actual Standard	2020/21 Supplementary Standard	2020/21 Total Standard	2020/21 Actual Standard
Quarterly reports to Ministers are delivered on time	New measure	100%	100%	Achieved (see Note1)

*Note 1: reporting has been more frequent as and when needed to keep the Minister continually updated.*

#### Comment

- Developed a project plan for the Phase 1 feasibility study based around four key workstreams: pumped hydro at Lake Onslow, other pumped hydro, other comparator technologies (non-pumped hydro) and market interactions and implications.
- Scoped and initiated a tender process for an engineering, geotechnical and environmental investigation of a pumped hydro scheme at Lake Onslow. This investigation will determine key design parameters of the scheme, and provide additional information on the environmental and consenting pathways for the project.
- Scoped and commissioned an assessment of the environmental, landscape and recreational values at Lake Onslow from DOC, and an ecology assessment of Lake Onslow from NIWA, the Cawthron Institute and the University of Otago. Early fieldwork on both these projects was undertaken in May.
- Commissioned NIWA to undertake an assessment of other alternative pumped hydro locations based on a nationwide GIS scan. This scan is now complete. Suggestions for other pumped hydro and other hydro locations were also gathered through direct engagement with existing generators.
- Identified a list of 27 potential comparator technologies to renew and assess alongside pumped hydro at Lake Onslow, and pumped hydro elsewhere. This long-list was then screened down to a short-list based on research and stakeholder feedback.

- Procured and received two pieces of economic analysis:
  - Concept Consulting/John Culy Consulting considered how large a dry year solution, or combination of solutions, needs to be in order to manage security of supply in a system with very high levels of renewable electricity
  - Sapere, Energy Link and Chapman Tripp looked at how a Lake Onslow-sized solution would interact in the spot market for electricity
- Initiated, selected and established a ten member Technical Reference Group to support the work of the NZ Battery Project. Full day meetings were held in May and June.
- Provided a Project status update to the Minister in early June.

## Financial

Expenses (\$000)	2019/20 Actual	2020/21 Estimates	2020/21 Supplementary Estimates	2020/21 Actual
Total Appropriation	-	-	29,787	507

## Comment

Funding for the NZ Battery project was received through the Infrastructure Reference Group in July 2020.

Funding of \$30 million was indicatively allocated for phase 1 of the project and appropriated to 2020/21. At the time of appropriation it was anticipated that phase 1 would be completed in financial year 2020/21. Due to the time taken to establish a specialist team, establish the technical reference group and undertake significant pieces of technical procurement, a large portion of phase 1 will continue into financial year 2021/22. Additionally, milestone payments for contracts already secured span financial years and the associated expenses will be recognised when incurred. The underspend from 2020/21 is now expected to be spent in 2021/22.

In addition to the \$507,000 expenditure in 2020/21, a further \$213,000 was transferred to the Department of Conservation for advice.

## Energy and Resources: Energy Solutions for Public and Māori Housing

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### Scope of Appropriation

This appropriation is limited to the provision of energy solutions on Public and Māori housing.

### Intention Statement

This appropriation is intended to achieve lower household energy costs and decarbonise public housing infrastructure through the trial and evaluation of renewable energy solutions.

### Assessment of Performance

#### Non-Financial

Performance Measure	2019/20  Actual Standard	2020/21  Supplementary Standard	2020/21  Total Standard	2020/21  Actual Standard
Percentage of projects funded that are assessed against all relevant criteria	New measure	100%	100%	100%
Percentage of funded projects that provide the data and insights required under funding contract	New measure	100%	100%	baseline being developed

#### Comment

Fifteen renewable energy projects for Māori housing were supported in the first round of this Fund. Funding contracts for all projects were signed in 2020/21, with implementation of the projects ongoing. All funded projects were assessed and prioritised against the criteria for this Fund.

Kāinga Ora is scoping the first public housing renewable energy project under the Fund. Kāinga Ora's expenditure in 2020/21 was all operational expenditure on design of the first project and scoping of a future project pipeline. Delivery of the first public housing project will take place in 2021/22.

The evaluation process for the fund was still under development at financial year end, and few projects were completed. The performance measures around data and insights will therefore be implemented from 2021/22 onwards.



**Financial**

<b>Expenses (\$000)</b>	<b>2019/20 Actual</b>	<b>2020/21 Estimates</b>	<b>2020/21 Supplementary Estimates</b>	<b>2020/21 Actual</b>
Total Appropriation	-	-	500	500

**Comment**

This appropriation was restructured into an MCA, reported in MBIE's annual report to better support the initiative intent. The funds remaining in this appropriation were fully distributed to Kāinga Ora, to support the establishment phase of the project.

## Energy and Resources: Meeting Crown Obligations (MYA)

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### Scope of Appropriation

This appropriation is limited to expenses incurred in meeting, or arising from, Crown obligations in the Energy and Resources portfolio.

### Intention Statement

This appropriation is intended to achieve timely and accurate delivery of the Crown obligations.

### Assessment of Performance

#### Non-Financial

Performance Measure	2019/20  Actual Standard	2020/21  Total Standard	2020/21  Actual Standard
All deliverables are met	New Measure	Achieve	-

#### Comment

Funding was appropriated through Budget 21, however there was no activity against this expenditure for 2020/21 – this will now fall in future years.

#### Financial

Expenses (\$000)	2019/20  Actual	2020/21  Estimates	2020/21  Supplementary Estimates	2020/21  Actual
Total Appropriation	-	-	84,344	-

#### Comment

Funding was appropriated through Budget 2021, however there was no expenditure for 2020/21, due to uncertain timing of events requiring expenditure. As the timing of expenditure against this appropriation is uncertain, it has been established as an MYA, allowing the underspend to be available in future years.

## *Non-Departmental Other Expenses*

### **Energy and Resources: National New-Energy Development Centre (M28)**

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#### **Scope of Appropriation**

This appropriation is limited to establishing and operating a National New-Energy Development Centre.

#### **Intention Statement**

This appropriation is intended to achieve the acceleration of the transition to a clean energy system, and low-emissions economy by reducing the time, cost and risk associated with the development and commercialisation of energy innovation.

#### **Assessment of Performance**

##### **Non-Financial**

<b>Performance Measure</b>	<b>2020/21 Supplementary Standard</b>	<b>2020/21 Total Standard</b>	<b>2020/21 Actual Standard</b>
Number of performance and monitoring meetings over the financial year	New Measure	At least 8	At least 8
Percentage of agreed key performance indicators that have been met on time	New Measure	90%	100%
Progress on agreed work programme milestones and financial performance and is reported within agreed timeframes	New Measure	Achieved	Achieved

#### **Comment**

In the 2020/21 financial year, Ara Ake was successfully established as the National New Energy Development Centre, including the appointment of the Board, the Chief Executive and core staff. As of year-end, it had also onboarded fifteen non-pecuniary shareholders, and had met all key performance indicators set out in its funding agreement and in line with performance measures. It has now moved out of the start-up phase and into a “Build” phase focused on expanding its operations.

A key achievement in the 2020/21 financial year was designing a suite of pathway to commercialisation services and building capability to deliver them. This workstream targets support towards innovators to accelerate the demonstration and commercialisation of new, clean energy solutions. The services being offered include capability development, access to capital support, stakeholder introductions, community engagement, market intelligence and project management.

Ara Ake is implementing this through one-to-one partnerships with innovators (including offering demonstration and commercialisation advice to a Taranaki-based company on its wave and tidal energy solution), through partnering in the Orion Energy Accelerator

programme to support NZ-based initiatives, and by partnering with US-based Elemental Excelsior as a Scale-Up partner to provide New Zealand energy start-ups with access to Elemental Excelsior's global experience and resources. An early success from this initiative is a collaborative research agreement between NZ's South Island hydro generators and a Swiss technology company.

Examples of other projects delivered include independent study into decarbonising long distance heavy freight and a tool which compares the cost of different heavy freight technologies, establishing a multiple trading relationships pilot for the electricity industry, and supporting the Parihaka Papakāinga Trust (PPT) on the development of an Expression of Interest for the Māori and Public Housing Renewable Energy Fund.

## Financial

Expenses (\$000)	2019/20  Actual	2020/21  Estimates	2020/21  Supplementary Estimates	2020/21  Actual
Total Appropriation	1,200	8,400	8,400	8,400

## Comment

Funding for the National New Energy Development Centre was provided through Budget 19 and structured to fund the "Start-up" and "Build" stages of establishing the organisation.

Payments in 2020/21 have been made to Ara Ake in-line with the Funding Agreement between the Ministry of Business, Innovation and Employment (MBIE) and Ara Ake Limited for establishment of the National New Energy Development Centre. The structure of the appropriation and timing of payments is being reviewed for 2021/22 onwards to ensure it best supports the "build" phase of operations.

## Non-Departmental Capital Expenditure

### Energy and Resources: Crown Energy Efficiency – Capital Injection (M28)

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#### Scope of Appropriation

This appropriation is limited to capital injections to Crown entities to assist public sector agencies in implementing energy efficiency and carbon emission reducing projects.

#### Intention Statement

This appropriation is intended to achieve greater energy efficiency and emission reductions by providing funding assistance to Crown entity projects approved under the State Sector Decarbonisation Fund.

#### Assessment of Performance

##### Non-Financial

Performance Measure	2020/21 Supplementary Standard	2020/21 Total Standard	2020/21 Actual Standard
Amount of funding to assist Crown entities provided in accordance with the investment principles of the State Sector Decarbonisation Fund	New measure	100%	100%

#### Comment

Ten Crown Entities signed agreements to implement energy efficiency and carbon emission reducing projects in 2020/21. These Crown Entities are: Accident Compensation Corporation, Auckland University of Technology, Lincoln University, Kāinga Ora, Massey University, Scion, Southern Institute of Technology, University of Auckland, University of Canterbury and Victoria University of Wellington.

Five of these Crown entities had milestones due in 2020/21. Lincoln University and Auckland University of Technology did not meet their milestones due to COVID-19 and unforeseen circumstances, but have agreed new milestones dates with MBIE and EECA (beginning in March 2022 and April 2022 respectively).

The following Crown Entities met their 2020/21 milestones and completed their projects:

- Accident Compensation Corporation (ACC): The purchase, installation and commission of twenty five new electric vehicles and infrastructure system at various ACC sites around New Zealand. The Project has a carbon savings target of 35 tonnes CO<sub>2</sub> per year.
- Scion: The purchase, installation and commission of three new electric vehicles and infrastructure system at the Scion Rotorua offices. The Project has a carbon savings target of 6.5 tonnes CO<sub>2</sub> per year.

Victoria University of Wellington met its 2020/21 milestone (replacement of old light fittings with more energy efficient LEDs).

## Financial

Expenses (\$000)	2020/21 Estimates	2020/21 Supplementary Estimates	2020/21 Actual
Total Appropriation	-	16,787	1,004

### **Comment**

Funding was appropriated from the State Sector Decarbonisation Tagged Contingency during 2020/21 for the total value of contracts entered into with those Crown entities receiving funding through the initiative. Actual payments are made once relevant milestones are achieved. As milestones can span financial years, only those milestones achieved to date were expensed at the end of financial year 2020/21. An in-principal expense transfer has been requested through the October baseline update to move the 2020/21 underspend into 2021/22 to align with contracted milestones.