Consultation on EECA's 2019/20 levy funding proposal and related work programme

Mobilising New Zealanders to be world leaders in clean and clever energy use

Energy Efficiency and Conservation Authority
Te Tari Tiaki Pūngao

Published on: 13 November 2018
Submissions close: 5pm, 14 December 2018

1 Executive summary

Scope of consultation

This consultation paper sets out and seeks submissions on the Energy Efficiency and Conservation Authority's (EECA) levy funding proposal for our 2019/20 work programme from three energy levies – the Electricity Industry Levy (electricity levy), the Gas Safety, Monitoring and Energy Efficiency (GSMEE) levy, and the Petroleum or Engine Fuel Monitoring (PEFM) levy. Submissions are sought on EECA's levy proposal by **5:00pm on 14 December 2018.**

EECA's 2019/20 levy funding proposal

EECA's activities are funded by the Crown through appropriations of public money. Some of these activities are partially funded from levies on electricity, natural gas and engine fuels (petrol, diesel, ethanol and biodiesel). The proposed 2019/20 work programme was developed using zero-based budgets.

For 2019/20, EECA's proposal is for **$13.8 million** of funding from the three energy levies, made up of the following proportions:

- $7.5 million from the PEFM levy (54%)
- $5.2 million from the electricity levy (38%)
- $1.1 million from the GSMEE levy (8%).

EECA proposes to use the levies to partially fund the following activities in 2019/20 and we welcome submissions on these proposals:

- **Efficient and low-emissions transport:** $7.5 million is sought from the PEFM levy to invest in the **Low-Emission Vehicles Contestable Fund** ($7 million) and an **EV Information Campaign** ($0.5 million), to promote and support the uptake of electric vehicles (EVs). We propose for the Contestable Fund to remain at $7 million to ensure we can continue to accelerate the uptake of low-emission vehicles during a time of high-need and high-demand, consistent with the Government's priority of transitioning New Zealand to a low-emissions economy. In last year's consultation (2018/19) we proposed to bring $1 million in funding forward from out-years. This consultation round we do not propose to bring funding forward but we are seeking $7 million in total for 2019/20. EECA will continue to cover the costs of administering the Contestable Fund from non-levy appropriations.
- **The Equipment Energy Efficiency (E3) Programme:** $2.3 million is sought from the electricity levy and $0.2 million from the GSMEE levy to invest in the E3 Programme to develop **business** and **residential** product energy efficiency standards and regulations.
- **Productive and low-emissions business:** $2.65 million is sought from the electricity levy and $0.87 million from the GSMEE levy to invest in the **Large Energy User programme** to support businesses in energy efficient and renewable energy investments, and the adoption of best energy management practice. We also propose to invest in the **Technology Demonstration Programme** with $0.25 million from the electricity levy and $0.03 million from the GSMEE levy. This will

support demonstration projects for proven, but under-utilised energy efficient technologies and processes.

- As we spent less than the $1.3 million recovered from the GSMEE levy in 2017/18, we propose to reduce the amount of GSMEE levy funding we request to $1.1 million in 2019/20. The underspend from the GSMEE levy in 2017/18 will be returned to GSMEE levy-payers as a credit against the amount that would have been ordinarily levied in 2019/20. When developing our 2020/21 work programme EECA will consider whether a change to the amount of funding from the GSMEE levy is needed to fulfil its statutory functions, for example to achieve identified benefits in gas efficiency.

EECA Intervention	**PEFM levy**		**Electricity Industry Levy**		**GSMEE levy**	
	2018/19 levy amount	**2019/20 levy proposal**	**2018/19 levy amount**	**2019/20 levy proposal**	**2018/19 levy amount**	**2019/20 levy proposal**
Low Emission Vehicles Contestable Fund	$7.0 million	$7.0 million	-	-	-	-
EV information campaign	$0.5 million	$0.5 million	-	-	-	-
E3 Programme – *Residential* products energy efficiency standards and regulations	-	-	$1.55 million	$1.15 million	-	$0.10 million
E3 Programme – *Business* products energy efficiency and standards regulations	-	-	$1.04 million	$1.15 million	$0.05 million	$0.10 million
Large Energy User Programme	-	-	$2.12 million	$2.65 million	$1.05 million	$0.87 million
Technology Demonstration Programme	-	-	$0.21 million	$0.25 million	$0.19 million	$0.03 million
NABERSNZ		-	$0.28 million	-	-	-
Energy levy total	**$7.5 million**	**$7.5 million**	**$5.2 million**	**$5.2 million**	**$1.3 million**	**$1.1 million**
Total levy funding in 2017/18	$13 million					
Total levy funding in 2018/19	$14 million					
Total levy funding proposal for 2019/20	**$13.8 million**					

Contents

2 What you need to know to make a submission

2.1 What this consultation paper is about

This consultation paper seeks submissions on EECA's levy proposal and draft levy-funded work programme in 2019/20, which covers the period 1 July 2019 to 30 June 2020.

Consultation on EECA's levy funding proposal from the three energy levies is required under section 129A of the Electricity Industry Act 2010 for the electricity levy, and section 14A of the Energy (Fuels, Levies, and References) Act 1989 for the Gas Safety, Monitoring and Energy Efficiency (GSMEE) levy and the Petroleum or Engine Fuel Monitoring (PEFM) levy.

Appendix 1 (page 37) outlines the legal context for this consultation.

The Electricity Authority (EA) is consulting separately on its 2019/20 levy-funded appropriations and work programme focus areas — this consultation will commence on 13 November and conclude on 10 December 2018.

2.2 How to make a submission

You may provide your submission in electronic form, which can be emailed to **levyconsultation@eeca.govt.nz** with "**EECA 2019/20 Levy Consultation**" in the subject line.

You may also make a submission via an online survey available at:
https://www.surveymonkey.com/r/7PH6PZ7

Alternatively, you may wish to post a hard copy of your submission to EECA's address:

Level 8

44 The Terrace

PO Box 388

Wellington 6140

All received submissions (except those done by survey) will be acknowledged upon receipt. EECA will also provide written responses to each submission by 31 March 2019.

EECA will publish all submissions it receives on its website. If required, please indicate any information you wish to provide on a confidential basis and do not want published.

EECA is subject to the Official Information Act 1982 and this means we may be required to release information, unless there is a good reason to withhold it. If you indicate there is a part of your submission that should not be published, we will consult with you before deciding on releasing or publishing that information.

2.3 Submission deadline

The consultation period commences on 13 November 2018, and all submissions must be received **by 5:00 pm on 14 December 2018.**

2.4 Next steps

EECA will consider all submissions received before presenting our levy funding request for our 2019/20 work programme to the Minister of Energy and Resources in early 2019.

The approved appropriations will be announced by the Government on Budget day, which is usually in May. This information will be included in EECA's *Statement of Performance Expectations 2019 – 2020* which will be published in mid-2019.

2.5 EECA contact

If you have any questions regarding the contents of this consultation document or the submission process, please email EECA on **levyconsultation@eeca.govt.nz.**

3 About EECA and our strategic direction

3.1 Introduction

The Energy Efficiency and Conservation Authority (EECA) is the Crown entity established under the Energy Efficiency and Conservation Act 2000 (EECA Act) to 'encourage, promote, and support energy efficiency, energy conservation, and the use of renewable sources of energy'.

We want New Zealand to have a sustainable energy system that supports the wellbeing of current and future generations. As described in our new Statement of Intent (SOI 2018-2022)[1] we have refreshed our strategy and redefined our purpose, which is to *Mobilise New Zealanders to be world leaders in clean and clever energy use.* See page 10 for our strategy.

Under this strategy we have the following five strategic focus areas:

- Productive and low-emissions business;
- Efficient and low-emissions transport;
- Energy efficient homes;
- Government leadership;
- Engage hearts and minds.

These focus areas closely align with: the New Zealand Energy Efficiency and Conservation Strategy (2017-2022);[2] the commitments New Zealand has made as a party to the Paris Agreement on Climate Change; the ambitions of the Government in respect of the supply of renewable energy for the electricity sector; and the transition to a net-zero emissions economy by 2050.

These challenges are huge by anyone's definition and EECA is committed to playing its part. We look forward to working with a wide range of stakeholders and customers as we transition to a low-carbon and sustainable energy system that supports the prosperity, and the wellbeing, of current and future generations.

In 2017 the Energy Innovation (Electric Vehicles and Other Matters) Amendment Act 2017 (the Act) came into force. The Act expanded the purposes for which the electricity, PEFM, and GSMEE levies may be used. Part of the funds recovered through any of these three levies may now be applied to meet a portion of EECA's costs in performing its statutory functions, namely to encourage, promote, and support energy efficiency, energy conservation, and the use of renewable sources of energy. The Act gives EECA greater flexibility to use its levy funding for a broader range of activities. This flexibility will help to ensure EECA is able to continue fully contributing to the Government's emerging policies, including those aimed at

[1] EECA Statement of Intent 1 July 2018 – 30 June 2019: https://www.eeca.govt.nz/assets/Resources-EECA/EECA-Statement-of-Intent-2018-2022.pdf

[2] *Unlocking our energy productivity and renewable potential – the New Zealand Energy Efficiency and Conservation Strategy 2017 – 2022* (NZEECS): http://www.mbie.govt.nz/info-services/sectors-industries/energy/energy-strategies

transitioning New Zealand to a low-emissions economy (particularly when such programmes may cut across multiple fuel types).

3.2 The New Zealand Energy Efficiency and Conservation Strategy 2017-2022 (NZEECS)

The NZEECS is one of the guiding documents for EECA's strategic direction. It sets out the overarching policy direction for government support and intervention for the promotion of energy efficiency, energy conservation, and the use of renewable sources of energy. Section 21(2) of the EECA Act requires EECA to perform its functions in accordance with the NZEECS.

The NZEECS goal is for New Zealand to have an energy productive and low emissions economy. It encourages businesses, individuals, and public-sector agencies to take actions that will help us unlock our renewable energy, and energy efficiency and productivity potential, to the benefit of all New Zealanders.

3.3 EECA's investment approach

EECA designs and implements programmes that align with our statutory role, Government policy and priorities, the NZEECS priority areas, and our strategy (see following page). EECA seeks to invest in high-impact programmes, and we are continuously looking at how we can improve the way we measure, monitor and evaluate the effectiveness of all our programmes. Our five strategic principles as follows:

- **Focus on impact**: pursue high-impact change with agility and at pace;
- **Understand the customer**: focus on those it is important to influence and influence them based on what they care about;
- **Define the problem**: identify what's blocking progress and tackle it head on;
- **Join the dots**: work with and connect people and organisations who can be part of achieving our purpose;
- **Display leadership**: be proactive, have a fact-based point of view, own it.

Consistent with these strategic principles, the tools EECA uses to implement its strategy are as follows:

- Information and advice – targeting consumer and business needs and achieving behaviour change, including through market research to ensure we understand our customers and target our activities to maximise impact;
- Incentives – co-funding arrangements (including technology demonstrations) to help build capability, encourage action and innovation through risk-sharing, and leverage investment;
- Regulation and standards – where appropriate, to optimise market penetration in energy efficient products, appliances and practices;

Part 3 of this consultation paper (below) presents EECA's 2018/19 outcome framework. This summarises the outcomes EECA is seeking to achieve in each of the five strategic focus areas (see following page).

Our strategy

Our purpose

Mobilise New Zealanders to be world leaders in clean and clever energy use

Our strategic principles

Focus on impact

Pursue high-impact change with agility and at pace.

Understand the customer

Focus on those it is important to influence and influence them based on what they care about.

Define the problem

Identify what's blocking progress and tackle it head on.

Join the dots

Work with and connect people and organisations who can be part of achieving our purpose.

Display leadership

Be proactive, have a fact-based point of view, own it.

Our strategic focus areas

Productive and low-emissions business

Mobilise decision makers and technical experts to accelerate action.

Efficient and low-emissions transport

Switch the fleet to low-emissions technology while ensuring that any remaining fossil-fuelled vehicles are as efficient as possible.

Energy efficient homes

Optimise New Zealanders' use of renewable energy through energy efficient homes, technologies and behaviours.

Government leadership

Equip the public sector to innovate and lead the transition to clean and clever energy use.

Engage hearts and minds

Foster a society in which sustainable energy is expected and demanded.

Our desired outcome

A sustainable energy system that supports the prosperity and wellbeing of current and future generations

EECA's 2018/19 outcome framework

Our desired outcome

A sustainable energy system that supports the prosperity and wellbeing of current and future generations

Outcomes for each strategic focus area

- EECA's client businesses demonstrate best practices, continuously improve their energy and emissions productivity and motivate other businesses to take action
- New Zealand businesses are continuously improving their energy productivity and using sustainable energy to contribute to New Zealand's emissions reduction target

- New Zealanders have their transport needs met and use significantly less energy
- New Zealand's vehicle fleet is more energy efficient
- More New Zealanders choose a low-emissions vehicle over a fossil-fuelled vehicle and have a good experience using it
- People who do not buy a low-emissions vehicle choose a more efficient fossil-fuelled vehicle
- The Government develops policy options to improve New Zealand's transition to a low-carbon transport system

- Households consume electricity more efficiently to reduce peak loading on infrastructure
- More New Zealanders live in energy efficient homes and make informed choices on energy efficient technologies and behaviours
- New Zealand's residential energy-related carbon emissions decrease

- The state sector is an exemplar in improving its energy productivity and reducing its energy-related emissions
- State services implements energy policy and programmes to accelerate the transition to clean and clever energy use in New Zealand

- New Zealanders feel that the way they use energy positively contributes to achieving New Zealand's climate change commitments
- New Zealanders expect and demand energy-related products and services based on their energy efficiency and sustainability

Our strategic focus areas (output classes)

Productive and low-emissions business

Mobilise decision makers and technical experts to accelerate action.

Efficient and low-emissions transport

Switch the fleet to low-emissions technology while ensuring that any remaining fossil-fuelled vehicles are as efficient as possible.

Energy efficient homes

Optimise New Zealanders' use of renewable energy through energy efficient homes, technologies and behaviours.

Government leadership

Equip the public sector to innovate and lead the transition to clean and clever energy use.

Engage hearts and minds

Foster a society in which sustainable energy is expected and demanded.

3.4 Emerging Government policies and initiatives

The Government's climate change agenda is driving a number of policy initiatives, many of which are still being developed. A good example of this is the Zero Carbon Bill, which is the central lever of the Government's climate change agenda, and which is due to be enacted in mid-2019. EECA is well-placed to contribute to the Government's climate change agenda by mobilising New Zealanders to improve their energy productivity, to take advantage of emerging low-emission technologies, and help consumers and businesses alike to make clever and clean choices when using energy.

We are confident our 2019/20 work programme is aligned to the Government's priorities. Those most relevant to EECA's work include the following:

- The Zero Carbon Bill, which includes provision to establish a new independent Climate Change Commission. The Climate Change Commission's mandate, amongst other functions, is expected to include providing advice to the Government on how best to achieve the Government's goal of achieving 100 percent renewable electricity (in an average hydrological year);[3]
- The Government's response to the Productivity Commission's *Low-emissions economy* report, due to be published in December 2018;[4]
- Policies aimed at accelerating the transition to a low-emissions transport sector;

While it is too early to describe whether and how EECA's work programme will be impacted by these policies and initiatives, we expect our levy-funded programmes to contribute to the Government's wider policies and goals.

For more information about our 2019/20 work programme please see Appendix 3 on page 39.

3.5 Positive impacts for New Zealand from EECA's activities

Promoting energy efficiency and renewable energy

Improving energy efficiency is a low-cost way to help create a sustainable energy system that supports the prosperity and wellbeing of current and future generations. Improved energy efficiency increases energy productivity, and this supports businesses and exporters to become more profitable, competitive and innovative.

Energy efficiency can be achieved by using less energy to deliver the same services, using the same amount of energy to deliver a greater level of service, or by changing behaviours to reduce energy wastage. It is important that energy remains accessible and is delivered cost-effectively to households and businesses.

[3] See more information on the Ministry for the Environment's website here: http://www.mfe.govt.nz/climate-change/what-government-doing/climate-change-programme

[4] See the Productivity Commission's report on its website here: https://www.productivity.govt.nz/inquiry-content/3254?stage=4

Energy efficiency can also help to reduce peak demand, delivering electricity system-wide benefits to New Zealanders in the form of reduced or delayed investment in grid and distribution infrastructure, and less volatile wholesale prices.

Increasing the use of renewable energy reduces our dependence on fossil fuels, increases our energy security, makes us more resilient to fluctuating commodity prices, and reduces our energy-sector emissions.

Reduced energy costs

The most direct benefit to consumers from energy efficiency is cost savings. New Zealand spends approximately $18.5 billion on energy each year, and EECA estimates that New Zealand could save around 15 – 20% of its energy use through improved energy efficiency by 2030.[5]

In an efficient and competitive market, less energy will be used. This produces a mix of economic benefits and wealth transfers in the form of lower energy prices for energy users. Price reductions tend to be larger in markets with convex supply curves (such as electricity), where the cost of more production tends to increase steeply as demand increases.

Within energy systems, increased demand can create the need to build new and expensive infrastructure to generate or deliver energy. EECA's electricity efficiency activities help to control these costs for the benefit of all business and residential users, particularly when reducing peak demand.[6]

Reducing greenhouse gas emissions

Energy use and production cause about 40% of New Zealand's gross greenhouse gas emissions, primarily through using fossil fuels.[7]

While more than 80% of our electricity generation comes from renewable resources,[8] emissions from electricity generation still account for about 10% of New Zealand's total energy-related emissions, meaning that using our electricity more efficiently can reduce energy-related emissions.[9] At times, such as during very cold weather or low inflow periods, a significant portion of New Zealand's peak demand is met by thermally generated electricity, meaning that reducing peak demand is another important step to

[5] EECA's analysis using: *2016 Energy Balance,* Ministry of Business, Innovation and Employment's (MBIE); *Energy in New Zealand 2016,* MBIE; weekly oil price monitoring, MBIE; market data and relevant public domain reports.
[6] Concept Consulting Group Ltd, *What is the case for electricity efficiency initiatives*? June 2017.
[7] Ministry for the Environment, *New Zealand's Greenhouse Gas Inventory 1990 – 2016 Snapshot*, (April 2018) http://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/final_greenhouse_gas_inventory_snapshot.pdf
[8] The Ministry for Business, Innovation & Employment (MBIE), *Energy in New Zealand 2017*: https://www.mbie.govt.nz/info-services/sectors-industries/energy/energy-data-modelling/statistics/documents-image-library/electricity.xlsx
[9] MBIE, https://www.mbie.govt.nz/info-services/sectors-industries/energy/energy-data-modelling/statistics/greenhouse-gas-emissions

achieving the Government's goal of a 100 percent renewably electricity system (during a normal hydrological year).

Transport and process heat are large producers of energy-related emissions. New Zealand's growing transport energy needs are almost exclusively met by petroleum-derived fossil fuels, generating around 15 Mt CO_2e per annum[10]. Around 55% of our industrial and commercial heat needs are met by fossil fuels, generating around 8.3 Mt CO_2e per annum.[11] There are significant opportunities for New Zealand to reduce its emissions associated with energy use, and thereby help meet our Paris Agreement target.

In 2017/18, our electricity efficiency programmes resulted in approximately 45,326 tonnes CO_2e being avoided per annum.[12]

4 How EECA is currently funded?

4.1 EECA's funding

EECA's activities are funded by the Crown from general appropriations.

The following appropriations within Vote Business, Science and Innovation make up EECA's funding in 2018/19:

- **Appropriation – Energy Efficiency and Conservation:** This appropriation is limited to operational and policy outputs in accordance with statutory functions under the EECA Act and the government's energy strategies. It includes our non-levy Crown funding and funding from the three energy levies, and makes up the majority of EECA's funding ($30.584 million in 2018/19). It is intended to contribute to making improvements in energy efficiency, energy conservation and renewable energy.
- **Appropriation – Grant Scheme for Warm, Dry Homes:** this appropriation is limited to grants for retrofits to improve the thermal performance of dwellings occupied by low income owners.
- **Appropriation – Implementation of the Grant Scheme for Warm, Dry Homes**: this appropriation is limited to implementation of the grant scheme for warm, dry Homes (Warmer Kiwi Homes).
- **Appropriation – Crown Energy Efficiency:** this appropriation is limited to provision of funding for the Crown loans scheme to assist public sector agencies in implementing energy efficiency projects, and is intended to achieve energy efficiency savings in the public sector.

[10] EECA Energy End Use Database (EEUD) 2016 data (released in 2018): https://www.eeca.govt.nz/resources-and-tools/tools/energy-end-use-database/

[11] MBIE and EECA (2018). *Process Heat Overview Fact Sheet:* https://www.mbie.govt.nz/info-services/sectors-industries/energy/energy-efficiency-environment/process-heat-in-new-zealand/document-image-library/process-heat-current-state-fact-sheet.pdf .

[12] EECA analysis using the Ministry for the Environment emission factor methodology, *Guidance for Voluntary Greenhouse Gas Reporting – 2016: Using Data and Methods from the 2014 Calendar Year. Wellington: Ministry for the Environment.* http://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/2016-guidance-for-voluntary-corporate-greenhouse-gas-reporting.pdf

The Government collects energy levies which are partially invested in EECA's work programmes. **This paper consults on the level of levy funding that will be used to partially fund EECA's work programme only.**

The contributions to EECA's 2019/20 proposed budget and a comparison to the 2018/19 actual budget is shown below:

EECA's funding source by appropriation	18/19 Budget ($000)	19/20 Proposal ($000)
Non-departmental output expenses		
Energy Efficiency and Conservation		
Crown funded initiatives	16,584	16,584
Electricity levy funded initiatives	5,200	5,200
PEFM levy funded initiatives	7,500	7,500
GSMEE levy funded initiatives	1,300	1,100
Non-departmental other expenses – multi-year appropriations		
Warmer Kiwi Homes - Implementation	11,600	13,920
Warmer Kiwi Homes - Grants	900	1,080
Balance of WUNZ appropriation b/f	6,103	-
Total operational appropriations	**49,187**	**45,384**
Other revenue	1,133	833
Total operational funding	**50,320**	**46,217**
Non-departmental capital expenses		
Crown Energy Efficiency	2,000	2,000
Total capital funding	**2,000**	**2,000**

4.2 Who pays the energy levies?

i. Electricity Industry Levy

Section 128 of the Electricity Industry Act 2010 provides for a levy on electricity industry participants. The funds recovered by this levy meet many of the costs of the Electricity Authority (EA).

Prior to 1 July 2017, section 128 of the Electricity Industry Act 2010 provided that the electricity levy could only be used to meet a portion of EECA's costs in relation to the encouragement, promotion, and support of electricity efficiency. Section 128 of the Electricity Industry Act 2010 now provides that the electricity levy can fund a portion of the costs of EECA in performing all of its functions, and in exercising its powers and duties, under the EECA Act (and so is no longer limited to electricity efficiency activities).

The EECA portion of the levy is collected from electricity industry participants that purchase electricity from the wholesale market (typically electricity retailers) at a rate of $0.1262/MWh purchased in 2018/19.

This levy is passed on to consumers and this is estimated to cost an average of $0.84 per household each year.[13] The 2019/20 electricity levy rate will be published in the New Zealand Gazette in May 2019.

ii. Petroleum or Engine Fuel Monitoring (PEFM) levy

Section 24 of the Energy (Fuels, Levies and References) Act 1989 provides for the collection of a levy on each litre of petroleum or engine fuel sold (petrol, diesel, ethanol, and biodiesel).

The PEFM levy is payable by fuel importers (who pass on the cost to consumers). Imported petrol and diesel is levied by the New Zealand Customs Service at the port of import, whereas imported oil is levied at the refinery once processed into the finished product.

Since 1 July 2017, section 14(2A) of the Energy (Fuels, Levies and References) Act 1989 provides that the PEFM levy can fund a portion of the costs of EECA in performing its functions and exercising its powers and duties under the EECA Act.

The indicative PEFM levy rate for 2019/20 is 0.3 cents, including 0.1 cent for the variable EECA cost, and 0.2 cents for non-EECA activities. The final levy rate will be published in the New Zealand Gazette in May 2019.

iii. Gas Safety, Monitoring and Energy Efficiency (GSMEE) levy

Section 23 of the Energy (Fuels, Levies and References) Act 1989 provides for the collection of a levy on piped natural gas, except for gas which is sold for used as a feedstock or for the generation of electricity or is liquefied petroleum gas. The GSMEE levy is payable by sellers of piped gas to gas retailers and gas retailers who sell piped gas.

From 1 July 2017, section 14(2A) of the Energy (Fuels, Levies and References) Act 1989 provides that this GSMEE levy can fund a portion of the costs of EECA in performing its functions and exercising its powers and duties under the EECA Act.

The indicative GSMEE levy rate for 2019/20 is 3.4 cents, including 1.4 cents for the variable EECA cost, and 2 cents for non-EECA activities. The final levy rate will be published in the New Zealand Gazette in May 2019.

[13] EECA analysis based on Electricity Authority data (https://ea.govt.nz/about-us/what-we-do/how-were-funded/levy-rates/2018-2019/), Statistics New Zealand's household estimate (https://www.stats.govt.nz/information-releases/dwelling-and-household-estimates-june-2018-quarter), MBIE's Energy in New Zealand 2017 electricity data (https://www.mbie.govt.nz/info-services/sectors-industries/energy/energy-data-modelling/publications/energy-in-new-zealand) and information on Levies rates (https://www.gazette.govt.nz/assets/pdf-cache/2018/2018-go2517.pdf?2018-05-24%2010:19:01).

5 Proposed levy funded activities in 2019/20

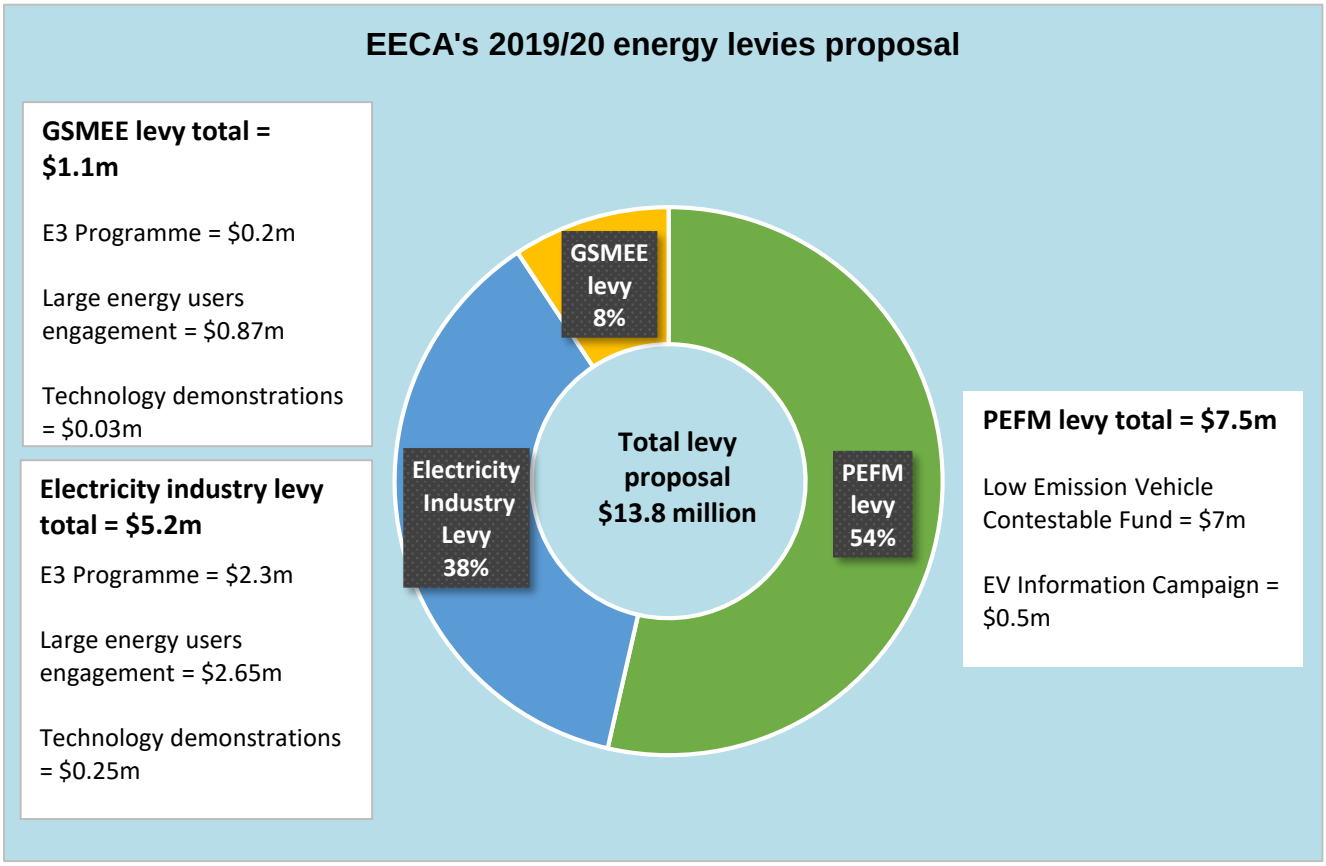
5.1 Our approach to providing information about EECA's proposed 2019/20 levy-funded programmes

Consistent with our approach during last year's levy consultation, EECA has provided detailed information on the programmes that will be funded from the three energy levies, including the expected outputs and benefits these programmes will deliver, and the need for each programme. In addition, EECA has, where it considers this appropriate or practicable, also outlined the link between those groups being levied and whether they benefit from, or cause a need for, a particular levy-funded programme. The provision of information of this type helps to ensure transparency in the use of levy funding for EECA's programmes and assists EECA to consult with levy payers and other parties which EECA believes to be significantly affected by the levy. In future years, where EECA's work programme includes more activities that achieve multiple benefits relevant to more than one levy, we may seek to fund these activities from multiple levies (for example as we currently do with the Large Energy User, Technology Demonstration, and E3 programmes).

EECA has again this year provided more information about its whole proposed programme portfolio to demonstrate the wider context for EECA's work, and how our partially levy-funded programmes fit within this wider portfolio (see Appendix 3, page 39).

5.2 EECA's levy funding proposal in 2019/20

For 2019/20, EECA's levy funding proposal is **$13.8 million** from the three energy levies at the proportions and allocations in the graph below:



Please note that in Appendix 3 (page 39) – *Table of EECA's proposed 2019/20 draft work programme and forecasted budget* – EECA is not seeking to recover 100% of the costs of levy-funded activities from the levies. We are instead proposing to recover 64% of the total costs of electricity-related programmes from the electricity levy, 68% from the GSMEE levy, and 77% from the PEFM levy. The balance of the costs of the programmes will be covered by EECA's baseline appropriation: all EECA's levy-funded programmes are only partially funded by levy-funding.

This is because:

- The method for allocating overheads to levy-related activities, and assessing the proportion of programme costs across levy sources is subjective, albeit based on robust assumptions. Consequently, EECA has chosen to take a conservative approach in not seeking to fully recover all assessed costs from the levies.
- The total assessed costs of all levy-funded programmes is $19.55 million, but Cabinet has only made provision for EECA to recover $17.5 million from the levies, so we cannot fully recover all assessed costs in any case.

6 Efficient and low-emissions transport activities

The transport sector provides the largest opportunity to improve New Zealand's energy productivity and energy-related emissions profile. Transport is responsible for about 18% of New Zealand's total greenhouse gas emissions each year and 45% of energy-related emissions.[14] In 2016, domestic transport accounted for 82% of demand from oil products.[15]

There are significant improvements to be made using sustainable and efficient technologies, particularly electric vehicles. About three million tonnes of energy-related emissions can be avoided in 12 years by making economically feasible changes to how we move around.[16] This could largely be achieved by a switch to electric vehicles. Meeting our transport needs with sustainable energy will reduce emissions and our dependence on imported fuel.

The Government's Electric Vehicles (EV) Programme includes a package of measures to accelerate the uptake of EVs. The EV Programme has a target of doubling the number of registered EVs in New Zealand every year to reach 64,000 by the end of 2021. We are currently on track to achieve this target with over 10,000 EVs registered in New Zealand, against a 2018 calendar year target of 8,000 registered EVs.[17]

EECA is responsible for delivering two components of the programme – **the Low Emission Vehicles Contestable Fund** (Contestable Fund) and **EV Information Campaign.** In 2019/20 we propose to part levy fund the Contestable Fund and the EV Information Campaign.

6.1 Low Emission Vehicles Contestable Fund

The purpose of the Contestable Fund is to encourage innovation and investment that will accelerate the uptake of low emission vehicles in New Zealand that might not otherwise occur.[18] After four funding rounds, EECA has directly committed $12.9 million of government funding to date across 63 projects, with applicants providing at least 50% of project costs (and in many cases more than 50%).

[14] Ministry for the Environment, *New Zealand's Greenhouse Gas Inventory 1990 - 2015*.
[15] The Ministry for Business, Innovation & Employment, *Energy in New Zealand 2017*.
[16] EECA's Economic Energy Potentials Tool 2016
[17] See Ministry of Transport's website: https://www.transport.govt.nz/resources/vehicle-fleet-statistics/monthly-electric-and-hybrid-light-vehicle-registrations/
[18] You can read about all the projects approved for funding under the Low Emission Vehicles Contestable Fund at the following: https://www.eeca.govt.nz/funding-and-support/low-emission-vehicles-contestable-fund/low-emission-vehicles-contestable-fund-successful-projects/

EECA establishes the 'investment focus' before each round to signal to applicants the types of projects that will be prioritised in each round and where the Government intends to target its investment. The investment focus is approved by the Minister of Energy and Resources. The current investment focus can be found on EECA's website at the footnoted link.[19]

EECA measures the success of the funding by evaluating how the individual projects contribute to the Fund's overarching objectives. We closely monitor the progress of all funded projects and will evaluate their performance in subsequent years. For a list of projects funded to date see EECA's website at the footnoted link.[20]

The expected outputs for the **Low Emission Vehicles Contestable Fund** in 2019/20 include:

- Co-investing up to $7.0 million in projects that promote and support the uptake of low emission vehicle technologies and are consistent with the investment criteria;
- Completing at least two funding rounds;
- For projects completed, at least 75% deliver anticipated results.

6.2 EV Information Campaign

EECA is also responsible for administering the Government's EV Information Campaign, which is aimed at engaging and exciting New Zealanders about EVs and overcoming the known information barriers, specifically uncertainty about battery life, range anxiety, and uncertainty about how to charge EVs and uncertainty about where to find public charging stations. The Information Campaign also helps consumers compare the total cost of owning cars through our online Total Cost of Ownership tool.

The outcome we are seeking through the EV Information Campaign is that more New Zealanders choose an EV over a fossil fuelled vehicle and have a good experience using it.

For the **EV Information Campaign**, the expected activities in 2019/20 are:

- Publishing information on EECA's websites, social media channels and in brochures about EVs;
- Updating and maintaining the Government's EV website: https://www.electricvehicles.govt.nz;
- Reaching potential EV buyers through events and community outreach activities;
- Providing guidance and advice to motorists, car dealers, and other industry players;
- Managing productive stakeholder relationships with partners such as The Better NZ Trust and Drive Electric.
- Managing the '*EV Drive the Future*' brand and encouraging its use by multiple partners;

[19] https://www.eeca.govt.nz/funding-and-support/low-emission-vehicles-contestable-fund/low-emission-vehicles-contestable-fund/
[20] https://www.eeca.govt.nz/funding-and-support/low-emission-vehicles-contestable-fund/low-emission-vehicles-contestable-fund-successful-projects/

- Issuing communications and press releases through social media, traditional media and through third party partners;
- Conducting market research and monitoring to understand target audiences; and
- Commissioning authoritative reports and continuing to develop information on the state of EV technology and the implications for New Zealand.

6.3 Key benefits

The Contestable Fund and EV Information Campaign help New Zealanders understand and embrace the new technology, and support the country's transition to a low emissions economy. The widespread uptake of EVs will help New Zealand meet its climate change commitments, reduce fossil fuel consumption, improve local air quality, save money, diversify the sources of our transport energy, and enhance energy security in the long run.

6.4 2019/20 PEFM levy funding proposed for EV Programme

In 2019/20, EECA is seeking $7.5 million sourced (indirectly) from the PEFM levy to part-fund the two components of the EV Programme – comprising of $7 million for the contestable fund and $0.5 million for the EV Information Campaign.

As in 2018/19, EECA is again proposing $7 million from the PEFM levy for the Contestable Fund. This will make the same level of funding available in 2019/20 to get more projects underway earlier, when investment is likely to have greater impact accelerating uptake and supporting the Government's priority of transitioning to a low-emissions transport sector. Note that EECA will continue to fund operational expenditure for the Contestable Fund from our non-levy appropriation.

6.5 Linkage to PEFM levy funding

The transport sector is heavily reliant on fossil fuels, and contributes a large proportion of energy sector emissions. Due to continued growth in the domestic transport sector, emissions from road transport are increasing. EECA proposes to partially fund the Contestable Fund and EV Information Campaign from the PEFM levy (the cost of which is passed on to engine fuel consumers), with the overall goal to support the uptake of new and low emission vehicle technologies that contribute towards New Zealand meeting its Paris Agreement target. By harnessing New Zealand's highly renewable electricity system, and by promoting the transition to low-emissions vehicle technologies, the Contestable Fund and EV Information Campaign help to reduce negative externalities caused by internal combustion engine road vehicles, in particular carbon emissions and harmful air pollutants.

The Contestable Fund plays a critical role in fostering New Zealand's emerging low-emissions vehicles market. The Contestable Fund co-finances investments into low-emissions vehicle technology that would not be likely to occur, or likely to occur more slowly and with less coordination, without government support. By financing these projects, including through financing charging infrastructure and the diffusion of these technologies into a variety of sectors where they are yet to be utilised, the Contestable Fund will accelerate the uptake of low-emissions vehicles.

The EV Information Campaign helps consumers to overcome information barriers to investing in low-emissions vehicle technology. By providing consumers with access to authoritative, reliable information about EVs, the Information Campaign helps to improve New Zealanders' transport choices.

Summary of proposed changes to 2019/20 Efficient and low-emissions transport activities	
Low Emission Vehicles Contestable Fund	• No change to funding amount from 2018/19 ($7 million)
EV Information Campaign	• No change to funding amount from 2018/19 ($0.5 million)

7 Equipment Energy Efficiency (E3) Programme

The Equipment Energy Efficiency (E3) Programme is a joint programme with Australia that develops common regulatory energy efficiency standards for both residential and business products.[21] Collaboration with Australia means that overheads are shared appropriately between the two countries, making the programme cost-effective and value for money.

The programme includes:

- the development and optimisation of minimum energy performance standards (MEPS) to ensure that poor-performing products are prevented from being sold in New Zealand; and
- ensuring regulated appliances for sale in stores display the correct energy rating label to help consumers choose energy efficient products.

Appliances of the same size and features may vary in the amount of energy they use. Without the programme, New Zealand consumers would be unable to assess and compare how much energy appliances use and how much appliances cost to run.

The E3 Programme contributes to two of EECA's strategic focus areas, 'Productive and low-emissions businesses' and 'Energy efficient homes'. The programme ensures manufacturers and suppliers raise the efficiency of their products, resulting in efficiency gains and reducing the total cost of owning and operating products in New Zealand.

7.1 Key outputs from the E3 Programme

The expected outputs for the E3 Programme in 2019/20 include:

- Managing industry compliance with the Energy Efficiency (Energy Using Products) Regulations 2002 through market surveys, check-testing and taking enforcement action when required;
- Ensuring MEPS align with Australia's where they positively benefit New Zealand;
- Contributing to the governance of the E3 Programme, including developing future strategies and priorities;
- Implementing MEPS for products. In 2019/20, this may include (subject to Ministerial approval) air conditioners, commercial refrigeration, domestic fridges and freezers, LED lighting and three phase motors.

[21] You can find out more information about the E3 Programme by visiting the following webpage: https://www.eeca.govt.nz/standards-ratings-and-labels/equipment-energy-efficiency-programme/about-the-equipment-energy-efficiency-programme/

- Investigating new or revised regulations for products. In 2019/20 this may include domestic hot water systems, building chillers, televisions, and industrial products (pumps, compressors and gas boilers).[22]

7.2 Key benefits

Since 2002, 72 million business and residential products have been sold under the E3 Programme to date – delivering energy savings of 42 PJs, emissions reduction of 1.66 Mt CO_2e, and representing savings of $1.027 billion in national benefit.

The key estimated benefits for this programme in 2019/20 include:

- Electricity savings of 278 GWh
- Carbon emissions reduction of 39.7 Kt CO_2e.
- National benefit of $24.5 million

7.3 2019/20 levy funding proposed for E3 Programme

In 2019/20, EECA is seeking $2.30 million sourced from the electricity levy and $0.20 million from the GSMEE levy to part-fund the E3 Programme. These levy funding amounts comprise of the following:

- $1.15 million sourced (indirectly) from the electricity levy and $0.10 million from the GSMEE levy for developing **residential** energy efficiency products standards and regulations; and
- $1.15 million sourced (indirectly) from the electricity levy and $0.10 million from the GSMEE levy for developing **business** energy efficiency products standards and regulations.

7.4 E3 Programme linkage to electricity and GSMEE levy funding

We propose to use the electricity levy and the GSMEE levy to part-fund the E3 Programme. Residential households and businesses benefit directly from the E3 Programme whenever they purchase appliances or equipment covered by the programme. Products will use less energy, for the same output, resulting in lower total cost of ownership (as compared to the absence of EECA's intervention). More efficient products results in lower costs for businesses, thereby enabling them to be more productive and profitable.

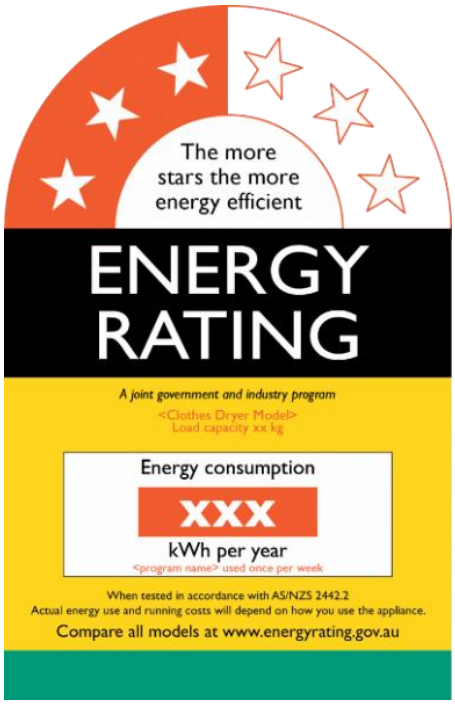
The E3 Programme effectively lowers overall energy demand (particularly electricity), leading to lower energy costs for all consumers and creating system-wide benefits that allow New Zealand to defer investment in new expensive generation infrastructure, and to continue meeting most of its stationary energy needs from renewable and low-emission energy resources.

Part of the E3 Programme relevant to gas users is proposed to be funded under the GSMEE levy in 2019/20 to support investigative work around new possible MEPs on business products (e.g. gas boilers), which

[22] Note that the final E3 work programme for Australia and New Zealand is developed and approved in May 2018 and can be subject to change.

would improve gas efficiency and reduce associated emissions. This part of the E3 Programme will therefore help to reduce negative externalities caused by GSMEE payers in the form of reduced carbon emissions.

Summary of proposed changes to 2019/20 E3 Programme activities	
Residential and business energy efficiency products standards and regulations	• Electricity levy funding change from $2.59 million to $2.30 million. Gas levy funding change from $0.05 million to $0.20 million.



Example of the energy rating label used in the E3 Programme on appliances

8 Productive and low-emissions business activities

There are significant opportunities for businesses to increase their energy productivity and use of sustainable energy. Businesses use about 50% of New Zealand's energy, excluding transport, and generate more than 40% of our energy-related emissions.[23]

Improving energy productivity and switching to sustainable energy has many benefits. These include direct benefits, such as lower energy costs and improved profitability, as well as a contribution to New Zealand's emissions reduction goals.

Process heat use represents the most significant stationary energy opportunity for improved energy productivity and emission reductions from the use of sustainable energy in the business sector.[24]

8.1 Large Energy User Programme

Businesses can improve their energy efficiency by up to 20% through smarter energy use and investment in energy efficient technologies.

EECA partners with large energy using businesses and state sector organisations to prioritise the areas of greatest potential for energy savings and emission reductions.[25] We facilitate access to tailored advice and services for large energy users across New Zealand, which assists them in identifying and planning for long-term solutions to energy and carbon management challenges, moves the sector forward on the energy transition journey, and helps build capability in the sector.

We work directly with large energy users because their large-scale operations offer the most cost-effective gains, and provides the greatest benefits to our economy. Their prominence also provides leadership to other businesses (large and small), and the best opportunity for diffusion of best energy management practices across the market.

8.2 Technology Demonstration Programme

Promising solutions to high energy use and emissions reduction often involves investment in new technologies. Investing in new and under-utilised technologies can carry risk for businesses due to uncertainty about performance and the risk of disruption to production lines, and this can have flow-on impacts on other areas of performance, consumer satisfaction and overall business competitiveness.

EECA's co-investment in technology demonstrations shares the risks. This investment supports early adoption of technologies by setting up/demonstrating commercially available, but proven under-utilised technologies, which have significant potential to reduce energy use and emissions in New Zealand.[26] The

[23] EECA's Energy End Use Database

[24] Process heat is energy use for commercial and industrial processes, manufacturing and heating. For example, meat and dairy processors use steam from boilers to sanitise equipment and process raw products, such as turning milk into powder. It generally involves the use of coal, gas, wood or electricity.

[25] You can find out more information about EECA's support of **large energy users** by visiting the following webpage: https://www.eecabusiness.govt.nz/funding-and-support/support-for-large-energy-users/

[26] You can find out more information about EECA's **technology demonstration projects** by visiting the following webpage: https://www.eecabusiness.govt.nz/funding-and-support/technology-demonstration-projects/

programme also includes *process changes*, which are under-utilised process improvements for making energy-using technology more energy efficient.

Picture above: Staff at Refining NZ's Marsden Point Oil Refinery, Whangarei, which is a major user of gas. EECA co-funded a range of energy efficiency improvements at the refinery, as well as supporting staff to develop ideas for using energy more efficiently and sustainably.[27]

[27] See more information on EECA's website: https://www.eecabusiness.govt.nz/resources-and-tools/case-studies/

Picture above: Ports of Auckland Chief Executive Tony Gibson with EECA Chief Executive Andrew Caseley and Account Manager Chris Thurston. Through our Technology Demonstration Programme, EECA co-funded installation of a new type of LED floodlights into light towers at Ports of Auckland's wharves and cargo handling areas. To date, this project has reduced Ports of Auckland's annual lighting costs by 66% (more than $270,000 in cost savings). Similar projects using LED floodlighting could be replicated at other ports, airports, stadiums, sporting complexes and car parks.

8.3 Key outputs for Productive and low-emissions business activities

The expected outputs for the **Large Energy User Programme** in 2019/20 include:

- Long-term energy management partnerships with large energy users, within which EECA provides direct account management support and non-capital co-funding for electricity and gas projects;
- Developing long-term energy transition pathways and targets in collaboration with New Zealand's largest energy-related carbon emitters, with EECA providing direct account management support and non-capital co-funding for opportunity analysis and feasibility studies.
- Support and funding for energy audits, operational efficiency improvements, energy monitoring and targeting, and optimisation of critical energy systems;
- Training and industry development; and
- Provision of energy management information, resources and advice.

For the **Technology Demonstration Programme**, the expected outputs in 2019/20 include:

- Providing co-funding to demonstrate proven, yet under-utilised energy efficient technologies or processes in New Zealand, with the aim of promoting at least four projects to increase more broad uptake; and
- Providing case studies and information to promote the results of demonstration projects and to encourage uptake within, and across sectors.

All funded technology demonstration projects are independently monitored, and must have a positive return on investment. Projects must also meet our cost-effective energy benefits criteria, be applicable to multiple sites and/or to other sectors, and demonstrate reduction in energy intensity and/or emissions.

8.4 Key benefits

The key benefits of the Large Energy User and Technology Demonstration Programmes are improved energy productivity and reduced carbon emissions. Through our partnerships with large energy-users we help businesses identify and invest in opportunities to improve energy efficiency, which creates public benefits primarily in the form of reduced carbon emissions, and benefits for businesses in the form of reduced energy costs. The Technology Demonstration Programme helps businesses adopt innovative technologies and processes through risk-sharing of the financial cost of investments. Not only do these projects create direct benefits, they help accelerate the diffusion of innovative technologies throughout the economy.

The key estimated quantitative benefits for the **Large Energy User Programme** in 2019/20 include:[28]

- Electricity savings of 16 GWh per annum

[28] Benefits from the Productive and low emissions business activities are verified through energy saving reports received from partnering businesses as milestones are completed.

- Gas savings of 25 GWh per annum
- Carbon emissions reduction of 7,500 tonne CO_2e per annum

For the **Technology Demonstration Programme**, the key estimated quantitative benefits in 2019/20 include: [29]

- Electricity savings of 2 GWh per annum
- Gas savings of 2 GWh per annum
- Carbon emissions reduction of 700 tonne CO_2e per annum

We are currently reviewing our method for calculating the financial benefits that result from the estimated energy savings above.

8.5 2019/20 levy funding proposed for productive and low-emissions business activities

In 2019/20, EECA is proposing to seek $2.9 million sourced from the electricity levy and $0.9 million from the GSMEE levy to part-fund our Productive and low-emissions business activities. These levy funding amounts comprise of the following:

- $2.65 million sourced (indirectly) from the electricity levy and $0.87 million from the GSMEE levy for the **Large Energy User Programme**; and
- $0.25 million sourced (indirectly) from the electricity levy and $0.03 million from the GSMEE levy for the **Technology Demonstration Programme.**

8.6 Productive and low-emissions business activities linkage to levy funding

EECA proposes that the electricity levy part-fund the Large Energy User and Technology Demonstration Programmes.

These programmes help to achieve electricity efficiency, resulting in demand reduction and downward pressure on wholesale prices.[30] Increased electricity efficiency can also result in reduced lines network costs when reducing peak usage, and can defer investment in new generation infrastructure – resulting in system-wide benefits for all electricity consumers, including levy payers.[31]

EECA also proposes the GSMEE levy be used to part-fund the two programmes as inefficient gas use by levy payers can cause emissions to be higher than they need to be. These programmes promote the efficient use of gas through boiler tuning, energy system optimisation and equipment upgrades. The two programmes will contribute towards lowering costs and creating efficient, more productive and lower-carbon businesses.

---

[29] Ibid.

[30] Energy Link, *Electricity Price Impact of the EECA Levy-funded Electricity Efficiency Programmes:* Updated 2015, (October 2015).

[31] Concept Consulting Group Ltd, *What is the case for electricity efficiency initiatives?* June 2017.

As well as increasing efficient gas use, in some situations there are also economically-viable lower-emission alternatives that can avoid the use of gas and its associated emissions. There are also specific situations where alternative lower emission fuels could be used to provide heating instead of gas. Examples include, using biomass fuels (e.g. wood) where appropriate, and using electrically-powered heat pumps to make hot water. Using gas levy funding to facilitate these activities, such as by providing information and funding feasibility studies, helps mitigate the emissions that gas causes and conserves gas reserves for those activities where there are no viable lower-emission alternatives.

Summary of proposed changes to 2019/20 Productive and low-emission business activities	
Large Energy User Programme	• Electricity levy funding change from $2.12 million to $2.65 million. Gas levy funding change from $1.05 million to $0.87 million.
Technology Demonstration Programme	• Electricity levy funding change from $0.21 million to $0.25 million. Gas levy funding change from $0.19 million to $0.03 million.

9 Summary of EECA's proposed 2019/20 levy-funded programmes

Summary of EECA's proposed 2019/20 levy-funded programmes				
EECA Intervention	**2019/20 levy request**			
	PEFM levy	**Electricity Industry Levy**	**GSMEE levy**	**Totals**
Low Emission Vehicles Contestable Fund	$7.00M	-	-	$7.00M
EV Information Campaign	$0.50M	-	-	$0.50M
E3 Programme – *Residential* products energy efficiency standards and regulations	-	$1.15M	$0.10M	$1.25M
E3 Programme – *Business* products energy efficiency and standards regulations	-	$1.15M	$0.10M	$1.25M
Large Energy User Programme	-	$2.65M	$0.87M	$3.52M
Technology Demonstration Programme	-	$0.25M	$0.03M	$0.28M
Totals	**$7.50 million**	**$5.20 million**	**$1.10 million**	**$13.80 million**

10 EECA's work programme

10.1 2019/20 draft work programme

EECA reviews its work programme each year against our statutory purpose, Government priorities, the NZEECS, as well as feedback received from our consultation process. EECA's work programme and its levy-funded investments will adapt over time to ensure our work aligns with Government priorities, current with new technologies, market changes and continues to deliver value for New Zealand in its energy use.

The table at Appendix 3 (page 39) presents EECA's proposed 2019/20 draft work programme and forecasted budget, including both proposed levy and non-levy funded programmes. All EECA's levy-funded programmes are also partly met from our non-levy-appropriation.

The table should be read in conjunction with the ***Notes on EECA's financial tables*** at Appendix 2 (page 38). These notes explain EECA's calculation of the levy funding allocation for each programme.

EECA will take into account the following considerations before finalising our 2019/20 draft work programme and requesting the Minister of Energy and Resources' approval for our levy appropriation in early 2019:

- Feedback arising from this consultation;
- Government policies;
- our assessment of the optimal investment mix across the various investment areas.

Appendix 4 (page 40) presents a table on the current budget expenses for EECA's full current (2018/19) work programme, including work not funded from the energy levies. Please refer to the ***Notes on EECA's financial tables*** at Appendix 2 (page 37) when reviewing this table.

10.2 Report for 2017/18 on electricity efficiency levy-funded programmes

In 2017/18, EECA received levy funding from the electricity levy, GSMEE levy and PEFM levy. A detailed annual report on the outcomes of EECA's electricity efficiency levy-funded activities for 2017/18 is provided in Appendix 5.

Consultation questions

1) What kinds of engagement have you or your organisation had with EECA?
2) Which of the three levies do you pay?
    - Electricity Industry Levy
    - Petroleum or Engine Fuel Monitoring (PEFM) levy
    - Gas Safety, Monitoring and Energy Efficiency (GSMEE) levy
3) EECA's proposed levy-funded work programme in 2019/20 will request funding from the three energy levies set out in question 2. Do you support EECA's levy proposal for $13.8 million in 2019/20?
4) Do you support the proportions EECA has requested across the three energy levies?
5) Which of EECA's 2019/20 levy-funded activities are of most interest to you:
    - Low Emissions Vehicle Contestable Fund
    - EV Information Campaign
    - Equipment Energy Efficiency (E3) Programme
    - Large Energy User Programme
    - Technology Demonstration Programme
6) Do you support the mix of levy-funded activities listed above?
7) Are there any new activities or specific sectors that you think EECA should invest more or less levy funding in for 2019/20, and in the future?
8) Do you agree that EECA's levy-funded activities result in benefits for New Zealand businesses and consumers in:
    - Reducing greenhouse gas emissions
    - Reducing engine fuel consumption (e.g. petrol and diesel)
    - Improving energy productivity
    - Improving electricity efficiency
    - Improving gas efficiency
    - Encouraging, promoting, and supporting energy efficiency, energy conservation, and the use of renewable sources of energy?
9) Would you like to provide any other comments on EECA's 2019/20 levy proposal and activities?

Appendix 1: Legal context for this consultation

Electricity Industry Act 2010
Section 129A of the Electricity Industry Act 2010 requires EECA to consult with those industry participants who are liable to pay a levy and any other representatives of persons whom EECA believes to be significantly affected by a levy: **129A Energy Efficiency and Conservation Authority consultation about request for appropriation** (1) The Energy Efficiency and Conservation Authority must, before submitting a request to the Minister seeking an appropriation of public money for the following year, or any change to an appropriation for the current year, that relates to costs that are intended to be recovered by way of levies under section 128(3)(c), consult about that request with— (a) those industry participants who are liable to pay a levy under that section; and (b) any other representatives of persons whom the Energy Efficiency and Conservation Authority believes to be significantly affected by a levy. (2) The Energy Efficiency and Conservation Authority must, at the time when the request is submitted, report to the Minister on the outcome of that consultation. (3) This section applies to requests in respect of the financial year beginning 1 July 2018 and later financial years.

Energy (Fuels, Levies, and References) Act 1989
The Energy Innovation (Electric Vehicles and Other Matters) Amendment Act 2017 inserts section 14A into the Energy (Fuels, Levies, and References) Act 1989, which requires EECA to consult with those industry participants who are liable to pay a levy and any other representatives of persons whom EECA believes to be significantly affected by a levy: **14A Energy Efficiency and Conservation Authority consultation about request for appropriation** (1) The EECA must, before submitting a request to the Minister seeking an appropriation of public money for the following year, or any change to an appropriation for the current year, that relates to costs that are intended to be recovered by way of a levy under section 23 or 24, consult about that request with— (a) those persons who are liable to pay the levy; and (b) any other representatives of persons whom the EECA believes to be significantly affected by the levy. (2) The EECA must, at the time when the request is submitted, report to the Minister on the outcome of that consultation.

Appendix 2: Notes on EECA's financial tables

EECA's financial projections for its 2018/19 and 2019/20 work programmes

The tables at Appendices 3 and 4 (below) of this consultation paper outlines the financial projections for EECA's 2019/20 and 2018/19 work programmes based on current priorities.

As noted earlier in this paper, the final decision on the 2019/20 levy funding proposal will be influenced by many factors, including submissions received through this consultation process.

When reviewing the 2019/20 and 2018/19 work programme tables below, it is important for the reader to understand that:

- The expenses incurred by EECA in any given year are a mix of:
    - the operating costs of its activities; and
    - EECA's share of its co-investment with counterparties in pursuit of government objectives outlined in the NZEECS.
- The multi-year nature of EECA's co-investment activities.

To maximise the Government's investment in activities consistent with the NZEECS, EECA enters into agreements with counterparties that frequently span multiple financial years. A good example of this is the Low Emission Vehicles Contestable Fund.

To date, the EECA Board has approved $12.9 million of co-investments under the Contestable Fund. Many of the projects that have delivered the best value in terms of the funds' objectives span across more than one financial year. Outstanding contracted commitments under such agreements are set aside as committed funds as part of retained earnings in EECA's Statement of Financial Position at the end of every financial year.

The practical effect of this is that the impacts of commitments made in any one financial year are often reflected in part as a charge in the Statement of Comprehensive Revenue and Expenses for the year, and in part in committed retained earnings in the Statement of Financial position (see Note 16 EECA's 2017/18 Annual Report)

As a result, this makes the build-up of levy-funded programmes expenditure in any single year, for the Large Energy User and Technology Demonstration Programmes, more complicated as it spans multiple years.

It follows, therefore, that the expenses relating to co-investment payments in any subsequent years Statement of Comprehensive Revenue and Expenses reflects the movement in the provision for such commitments during the year.

Key financial drivers

I. Cost build up methodology

'Direct costs' are those costs directly attributable to specific programme activity.

'Indirect costs' are those costs which cannot be identified in a financially feasible manner with a specific programme activity.

Direct costs are charged directly to specific programme activity, and includes items such as:

- The co-funding provided by EECA;
- The directly attributable marketing costs of the programme activity; and
- Outsourced services to help deliver the programme; and
- The personnel costs associated with delivery of the programme.

Indirect costs are allocated to specific projects using a variety of cost drivers that are appropriate to the costs being allocated.

The main group of indirect costs that are required to be allocated are the HR, Finance, ICT, and Property costs.

These costs are predominantly a function of the number of people employed, and consequently, these costs are attributed in proportion to the FTE's allocated to each programme. Indirect costs comprise approximately one third of the fully allocated cost of each programme.

II. Calculation of levy percentages applicable to each programme

The levy related percentage that is specific to each programme activity is calculated using a methodology appropriate to each specific programme:

a. For the **E3 Programme**, the levy percentages are calculated by reference to the actual work and costs that were expended in the year on each standard/regulation. The levy element involved in each standard/regulation is then calculated by multiplying the total allocated cost by the assessed levy percentage.

b. All costs related to the **Low Emission Vehicles Contestable Fund** and **EV Information Campaign** are fully attributed as qualifying costs against the PEFM levy.

c. For the **Productive and low-emission business activities**, all the contracts are processed via EECA's grants system (GEM). Every milestone within each contract that is loaded in GEM has the relevant levy percentages attached to it based on the activities being carried out. The project's levy percentages are a weighted average value calculated by reference to each individual milestone paid that year associated with the project and the associated levy percentages.

III. Calculation of total levy costs expensed in the year

Having completed the allocation of costs to specific programme activity, the levy related percentages that are specific to each programme activity is applied.

The total levy costs expensed each year is the sum of the products of:

- costs allocated directly and indirectly to each specific programme activity and
- levy percentage applicable to each specific programme activity.

Appendix 3: Table on EECA's proposed 2019/20 draft work programme and forecasted budget

EECA's 2019/20 work programme										(as per 18/19 Budget)						Total Cost with Mvt in Commitments included			Levy funding allocated Pro-Rata (except for PEFML)		
										Commitments b/f			Commitments c/f								
		Electricity Industry Levy activities		GSMEE Levy activities		PEFM Levy activities		Non-Levy related activities		Electricity Industry Levy	GSMEE Levy activities	PEFM Levy activities	Electricity Industry Levy	GSMEE Levy activities	PEFM Levy activities	Electricity Industry Levy	GSMEE Levy activities	PEFM Levy activities	Electricity Industry Levy	GSMEE Levy activities	PEFM Levy activities
	Total fully allocated cost per project	%	$	%	$	%	$	%	$							$	$	$	$	$	$
Productive and low-emissions business																					
Standards and Regulations	1,775,570	*93%*	1,651,280	*7%*	124,290			*0%*	(0)							1,651,280	124,290	0	1,148,031	98,450	0
Information & Promotion to Business	1,653,702							*100%*	1,653,702							0	0	0	0	0	0
Process Heat in NZ (PHINZ)	198,476							*100%*	198,476							0	0	0	0	0	0
Commercial Buildings	20,000							*100%*	20,000							0	0	0	0	0	0
Large Energy Users - Direct*	**3,045,456**	***55%***	**1,675,001**	***18%***	**548,182**			***27%***	**822,273**	**(1,071,339)**	**(350,620)**		**814,000**	**266,400**		**1,417,662**	**463,962**	**0**	**985,611**	**367,503**	**0**
Technology Demonstrations	1,372,674	*25%*	343,169	*3%*	41,180			*72%*	988,325	(62,500)	(7,500)		85,000	10,200		365,669	43,880	0	254,226	34,757	0
Industry Development	402,011	*40%*	160,804	*30%*	120,603			*30%*	120,603	(74,300)	(24,767)		89,533	67,150		176,037	162,986	0	0	0	0
NABERSNZ	371,661	*80%*	297,329	*0%*				*20%*	74,332							297,329	0	0	0	0	0
Emissions Pathway Projects*	**1,640,462**	***50%***	**820,231**	***15%***	**246,069**			***35%***	**574,162**	**(87,500)**	**(26,250)**		**142,500**	**42,750**		**875,231**	**262,569**	**0**	**608,493**	**207,980**	**0**
Mandatory Reporting of Emissions	121,404							*100%*	121,404							0	0	0	0	0	0
Off-Road Diesel	441,772							*100%*	441,772							0	0	0	0	0	0
Process Heat Pilots	686,071	*25%*	171,518	*10%*	68,607			*65%*	445,946	(31,250)	(12,500)		43,750	17,500		184,018	73,607	0	0	0	0
Large Energy Users - Indirect*	**855,590**	***70%***	**598,913**	***30%***	**256,677**			***0%***	**0**	**(328,262)**	**(82,066)**		**371,230**	**159,098**		**641,881**	**333,709**	**0**	**446,259**	**264,330**	**0**
	12,584,849		**5,718,244**		**1,405,609**		**0**		**5,460,996**							**5,609,106**	**1,465,004**	**0**	**3,442,621**	**973,020**	**0**
Efficient and low-emissions transport																					
Transport Strategy & Development	435,831							*100%*	435,831							0	0	0	0	0	0
VFEL	156,139							*100%*	156,139							0	0	0	0	0	0
Electric Vehicles - CF	7,158,130					*100%*	7,158,130	*0%*	0			(5,395,441)			5,895,441	0	0	7,658,130	0	0	5,868,022
Electric Vehicles - IC	2,129,831					*100%*	2,129,831	*0%*	0							0	0	2,129,831	0	0	1,631,978
	9,879,931		**0**		**0**		**9,287,961**		**591,970**							**0**	**0**	**9,787,961**	**0**	**0**	**7,500,000**
Energy efficient homes																					
Standards and Regulations	1,775,570	*93%*	1,651,280	*7%*	124,290			*0%*	(0)							1,651,280	124,290	0	1,148,031	98,450	0
Energywise	1,967,121							*100%*	1,967,121							0	0	0	0	0	0
Thermal Envelope Options Development	553,979							*100%*	553,979							0	0	0	0	0	0
Peak Demand Management	269,798							*100%*	269,798							0	0	0	0	0	0
VTR and Councils	134,609							*100%*	134,609							0	0	0	0	0	0
Warmer Kiwi Homes	16,846,663							*100%*	16,846,663							0	0	0	0	0	0
	21,547,740		**1,651,280**		**124,290**		**0**		**19,772,170**							**1,651,280**	**124,290**	**0**	**1,148,031**	**98,450**	**0**
Government leadership																					
Public Sector - Large Energy Users*	**1,241,248**	***73%***	**906,111**	***3%***	**37,237**			***24%***	**297,900**	**(361,070)**	**(14,839)**		**331,420**	**13,620**		**876,461**	**36,018**	**0**	**609,348**	**28,530**	**0**
Influencing Strategy	228,169							*100%*	228,169							0	0	0	0	0	0
Hospitals Pilot	176,481							*100%*	176,481							0	0	0	0	0	0
Public Buildings Programme	178,609	*0%*		*0%*				*100%*	178,609							0	0	0	0	0	0
Fleet Audit Pilot	484,033							*100%*	484,033							0	0	0	0	0	0
	2,308,540		**906,111**		**37,237**		**0**		**1,365,192**							**876,461**	**36,018**	**0**	**609,348**	**28,530**	**0**
Engage heart and minds																					
Climate Change Strategy & Development	262,573							*100%*	262,573										0	0	0
Hearts and Minds	1,346,662							*100%*	1,346,662										0	0	
	1,609,235		**0**		**0**		**0**		**1,609,235**							**0**	**0**	**0**	**0**	**0**	**0**
Total to be expensed in 19/20	**47,930,295**		**8,275,635**		**1,567,136**		**9,287,961**		**28,799,562**	(2,016,221)	(518,542)	(5,395,441)	1,877,433	576,718	5,895,441	**8,136,847**	**1,625,312**	**9,787,961**	**5,200,000**	**1,100,000**	**7,500,000**
Less Levy expenditure related to commitments made and funded in prior years			2,016,221		518,542		5,395,441			OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
19/20 Levy activities expensed in year			6,259,414		1,048,594		3,892,520														
Add: 19/20 Levy activities contractually committed in year but not expensed in year (funding held in retained earnings)			1,877,433		576,718		5,895,441														
Total cost of 19/20 Levy related activities			**8,136,847**		**1,625,312**		**9,787,961**														
2019/20 Funding breakdown																					
Levy Appropriations			5,200,000		1,100,000		7,500,000														
EECA Baseline Appropriation			2,936,847		525,312		2,287,961														
			8,136,847		**1,625,312**		**9,787,961**														
* activities are included in EECA's 'Large Energy User Programme'																					

Appendix 4: Table on EECA's current 2018/19 work programme and budget

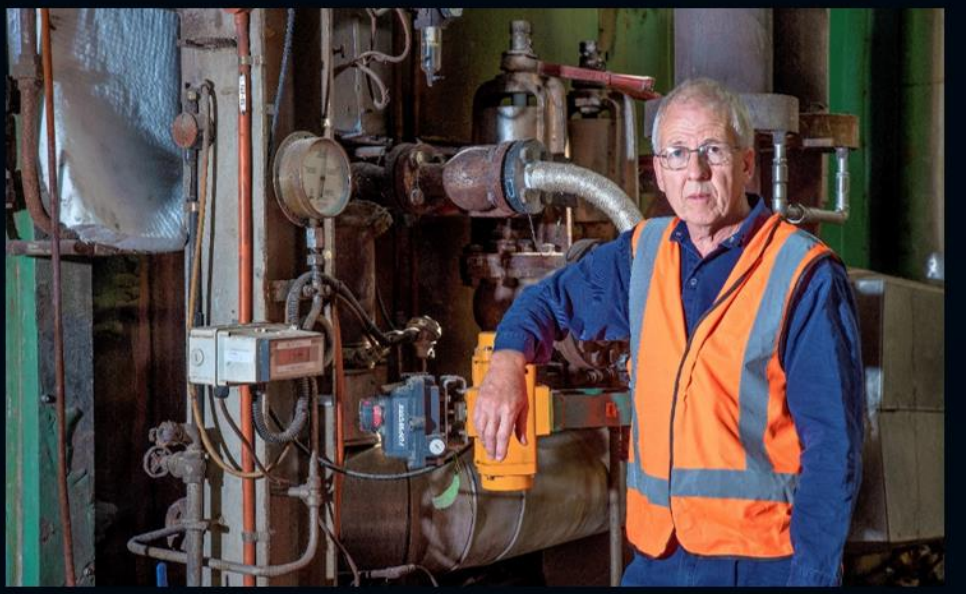
EECA's 2018/19 work programme and forecasted budget (Revised as at 1 October 2018)

		Electricity Industry Levy activities		GSMEE Levy activities		PEFM Levy activities		Non-Levy related activities		(as per 17/18 Actuals) Commitments b/f			Commitments c/f			Total Cost with Mvt in Commitments included			Levy funding allocated Pro-Rata (except for PEFML)		
	Total fully allocated cost per project	%	$	%	$	%	$	%	$	Electricity Industry Levy	GSMEE Levy activities	PEFM Levy activities	Electricity Industry Levy	GSMEE Levy activities	PEFM Levy activities	Electricity Industry Levy $	GSMEE Levy activities $	PEFM Levy activities $	Electricity Industry Levy $	GSMEE Levy activities $	PEFM Levy activities $
Productive and low-emissions business																					
Standards and Regulations	1,845,985	*93%*	1,716,766	*7%*	129,219			*0%*	(0)							1,716,766	129,219	0	1,005,169	107,547	0
Information & Promotion to Business	1,740,614							*100%*	1,740,614							0	0	0	0	0	0
Process Heat in NZ (PHINZ)	283,144							*100%*	283,144							0	0	0	0	0	0
Commercial Buildings	20,000							*100%*	20,000							0	0	0	0	0	0
Large Energy Users - Direct	4,324,118	*55%*	2,378,265	*18%*	778,341			*27%*	1,167,512	(1,641,593)	(608,804)		1,071,339	350,620		1,808,011	520,157	0	1,058,594	432,919	0
Technology Demonstrations	2,053,807	*25%*	513,452	*3%*	61,614			*72%*	1,478,741	(224,520)	(24,832)		62,500	7,500		351,432	44,282	0	205,764	36,855	0
Industry Development	971,741	*60%*	583,045	*20%*	194,348			*20%*	194,348	(459,144)	(116,078)		74,300	24,767		198,201	103,037	0	0	0	0
NABERSNZ	490,832	*80%*	392,666	*0%*				*20%*	98,166							392,666	0	0	0	0	0
Emissions Pathway Projects	1,539,464	*50%*	769,732	*15%*	230,920			*35%*	538,812				87,500	26,250		857,232	257,170	0	501,911	214,038	0
Mandatory Reporting of Emissions	136,007							*100%*	136,007							0	0	0	0	0	0
Off-Road Diesel	134,247							*100%*	134,247							0	0	0	0	0	0
NABERSNZ Case for Mandatory	29,030							*100%*	29,030							0	0	0	0	0	0
Process Heat Pilots	600,909	*25%*	150,227	*10%*	60,091			*65%*	390,591				31,250	12,500		181,477	72,591	0	0		0
Large Energy Users - Indirect	1,956,182	*80%*	1,564,946	*20%*	391,236			*0%*	(0)	(474,903)	(33,140)		328,262	82,066		1,418,305	440,162	0	830,420	366,340	0
	16,126,080		**8,069,097**		**1,845,769**		**0**		**6,211,213**							**6,924,088**	**1,566,618**	**0**	**3,601,858**	**1,157,700**	**0**
Efficient and low-emissions transport																					
Transport Strategy & Development	336,322							*100%*	336,322							0	0	0	0	0	0
VFEL	181,735							*100%*	181,735							0	0	0	0	0	0
Electric Vehicles - CF	6,446,940					*100%*	6,446,940	*0%*	0			(4,242,440)			5,395,441	0	0	7,599,941	0	0	5,970,031
Electric Vehicles - IC	1,947,674					*100%*	1,947,674	*0%*	0							0	0	1,947,674	0	0	1,529,969
	8,912,671		**0**		**0**		**8,394,614**		**518,057**							**0**	**0**	**9,547,615**	**0**	**0**	**7,500,000**
Energy efficient homes																					
Standards and Regulations	1,845,985	*93%*	1,716,766	*7%*	129,219			*0%*	(0)							1,716,766	129,219	0	1,005,169	107,547	0
Energywise	2,047,273							*100%*	2,047,273							0	0	0	0	0	0
Thermal Envelope Options Development	372,850							*100%*	372,850							0	0	0	0	0	0
Peak Demand Management	241,013							*100%*	241,013							0	0	0	0	0	0
VTR and Councils	170,332							*100%*	170,332							0	0	0	0	0	0
WUNZ: HHR	1,468,350							*100%*	1,468,350							0	0	0	0	0	0
Warmer Kiwi Homes	20,557,158							*100%*	20,557,158							0	0	0	0	0	0
	26,702,961		**1,716,766**		**129,219**		**0**		**24,856,976**							**1,716,766**	**129,219**	**0**	**1,005,169**	**107,547**	**0**
Government leadership																					
Public Sector/Crown Loans	1,780,509	*73%*	1,299,772	*3%*	53,415			*24%*	427,322	(648,081)	(26,498)		361,070	14,839		1,012,761	41,756	0	592,973	34,753	0
Govt Leadership in Renewable Heat	106,468	*0%*		*0%*				*100%*	106,468							0	0	0	0	0	0
Influencing Strategy	294,622							*100%*	294,622							0	0	0	0	0	0
Hospitals Pilot	122,009							*100%*	122,009							0	0	0	0	0	0
Public Buildings Programme	279,719	*0%*		*0%*				*100%*	279,719							0	0	0	0	0	0
Fleet Audit Pilot	373,487							*100%*	373,487							0	0	0	0	0	0
	2,956,814		**1,299,772**		**53,415**		**0**		**1,603,627**							**1,012,761**	**41,756**	**0**	**592,973**	**34,753**	**0**
Engage heart and minds																					
Climate Change Strategy & Development	345,667							*100%*	345,667										**0**	0	0
Hearts and Minds	751,230							*100%*	751,230										**0**	0	**0**
	1,096,897		**0**		**0**		**0**		**1,096,897**							**0**	**0**	**0**	**0**	**0**	**0**
Total to be expensed in 18/19	**55,795,422**		**11,085,634**		**2,028,404**		**8,394,614**		**34,286,770**	(3,448,241)	(809,352)	(4,242,440)	2,016,221	518,542	5,395,441	**9,653,614**	**1,737,594**	**9,547,615**	**5,200,000**	**1,300,000**	**7,500,000**
Less Levy expenditure related to commitments made and funded in prior years			3,448,241		809,352		4,242,440			OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
18/19 Levy activities expensed in year			7,637,393		1,219,052		4,152,174														
Add: 18/19 Levy activities contractually committed in year but not expensed in year (funding held in retained earnings)			2,016,221		518,542		5,395,441														
Total cost of 18/19 Levy related activities			**9,653,614**		**1,737,594**		**9,547,615**														
2018/19 Funding breakdown																					
Levy Appropriations			5,200,000		1,300,000		7,500,000														
EECA Baseline Appropriation			4,453,614		437,594		2,047,615														
			9,653,614		**1,737,594**		**9,547,615**														

Appendix 5: EECA's 2017/18 Annual Report on electricity efficiency activities

2017/18 Annual Report: EECA's levy-funded activities

Mobilising New Zealanders to be world leaders in clean and clever energy use



Energy Efficiency and Conservation Authority
Te Tari Tiaki Pūngao

Executive Summary

Our newly adopted purpose is to mobilise New Zealanders to be world leaders in clean and clever energy use. With 40% of our country's greenhouse gas emissions currently coming from the energy sector, there is an integral role for EECA to play in supporting the transition to a low-emissions and climate-resistant economy, and improving our energy productivity.

While electricity efficiency continues to be a key focus for EECA, 2017/18 was the first year we had access to new levy funding sources. This allowed us to broaden our focus on the parts of the energy sector, including transport and process heat, where the greatest opportunities exist for reducing emissions.

Over the past year our electricity and gas levy-funded programmes have saved 1.27 PJs of energy which is the equivalent of the power required to supply almost 37,000 households in a year. These programmes have also reduced approximately 62,000 tonnes of CO_2e emissions or the equivalent of removing nearly 27,000 fossil fuelled vehicles from our roads.

The Equipment Energy Efficiency (E3) programme continues to deliver significant electricity savings through product energy performance standards and labelling, helping New Zealand save nearly $24 million in 2017/18.

We continued to work with the largest energy using businesses in our economy that collectively use nearly a quarter of New Zealand's total energy. These ongoing partnerships are fundamental to EECA and we extend our appreciation to all collaboration partners.

The conversion of the light vehicle fleet to electric vehicles is also key if New Zealand is to successfully transition to a low emission economy. Over the past year we have continued to inform the public on the benefits of electric vehicles and it is encouraging to see the continuing increase of registered electric vehicles in New Zealand. We also delivered two rounds of the Low-Emission Vehicles Contestable Fund this year, committing $6.54 million to innovative projects collectively worth $20.35 million.

The past year has seen the establishment of a strong foundation for EECA to deliver even greater benefits in the future. We are excited as we continue delivering outcomes for a sustainable energy system that supports the prosperity and wellbeing of current and future generations.

Andrew Caseley
Chief Executive

November 2018

Contents

Introduction

The Energy Efficiency and Conservation Authority (EECA) is a Crown entity established under the Energy Efficiency and Conservation Act 2000. Our aim is for New Zealand to have a sustainable energy system that the supports the prosperity and wellbeing of current and future generations.

We are funded by the Crown through appropriations of public money. The Crown recovers a portion of this funding through levies. 2017/18 was the first year our levy funding came from the Petroleum or Engine Fuels Monitoring Levy (petroleum levy) and the Gas Safety, Monitoring and Energy Efficiency Levy (gas levy), in addition to the Electricity Industry Levy (electricity levy).

Under the Energy Innovation (Electric Vehicles and Other Matters) Amendment Act 2017, we are able to use funding from these levies to fulfil our statutory function to encourage, promote and support energy efficiency, energy conservation and the use of renewable sources of energy.

In November 2016, we carried out a consultation process to ask stakeholders and the public for their views about the use of the three levies for our proposed 2017/18 programme of work. Following consultation, the Minister of Energy and Resources allocated $13 million in levy funding. This total was the same as previous years but spread across the three levies:

- $6.5 million from the petroleum levy
- $5.2 million from the electricity levy
- $1.3 million from the gas levy

This report describes our levy-funded activities in 2017/18 and the benefits these programmes delivered.

Summary of levy-funded activity outputs

We design our programmes to focus on economic and achievable outcomes across all sectors of the New Zealand economy. In 2017/18, our levy-funded programmes:

- Delivered total energy savings of 427 GWh
- Co-funded six new or under-utilised energy saving technology demonstration projects
- Contributed to the accelerated uptake of electric vehicles in New Zealand by:
    - committing to co-invest $6.54 million in new low-emission vehicle initiatives
    - providing information on the EV website, with over 140,000 visits
    - providing 1,345 electric vehicles test drives at 111 EECA-supported events

Expenditure on levy-funded activities

A total of $17 million was spent during the year on levy-funded activities, which included $7.2 million of contracted commitments from the 2016/17 year. A further $8.5 million of commitments were contracted and have been carried over to 2018/19. The net position is therefore a total spend of $12.9 million.

Table 1 provides the proposed work programme and budget for 2017/18 and shows the amount funded from each levy and from EECA's baseline funding. Table 2 provides a breakdown of actual expenditure against the programmes delivered during the year.

Tables 3-4 show the movements for each of the levy funding sources.

Table 1: Our overall 2017/18 budget

EECA's current 2017/18 work programme and budget										*(as per 16/17 Actuals)*						Total Cost with movement in commitments included			Levy funding allocated Pro-Rata (except for PEFM Levy)		
										Commitments b/f			Commitments c/f								
	Total fully allocated cost per project	Electricity Industry Levy activities		GSMEE Levy activities		PEFM Levy activities		Non-Levy related activities		Electricity Industry Levy activities	GSMEE Levy activities	PEFM Levy activities	Electricity Industry Levy activities	GSMEE Levy activities	PEFM Levy activities	Electricity Industry Levy activities	GSMEE Levy activities	PEFM Levy activities	Electricity Industry Levy activities	GSMEE Levy activities	PEFM Levy activities
		%	$	%	$	%	$	%	$							$	$	$	$	$	$
Thermal Envelope																					
VTR and Councils	152,754							*100%*	152,754												
WUNZ:HH Rentals	16,114,152							*100%*	16,114,152												
Energywise	2,259,263							*100%*	2,259,263												
Thermal Performance post 30/06/18	1,063,277							*100%*	1,063,277												
	19,589,446		**0**		**0**		**0**		**19,589,446**							**0**	**0**	**0**	**0**	**0**	**0**
Household Energy Use																					
Energywise	968,256							*100%*	968,256												
Energy Star - Closure	272,256							*100%*	272,256												
Standards and Regulations (including E3)	2,006,045	*95%*	1,905,743					*5%*	100,302							1,905,743			1,404,302		
	3,246,557		**1,905,743**		**0**		**0**		**1,340,814**							**1,905,743**	**0**	**0**	**1,404,302**	**0**	**0**
Electric Vehicles																					
Electric Vehicles - CF	6,430,084					*100%*	6,430,084					(2,670,834)			2,670,834			6,430,084			6,000,000
Electric Vehicles - IC	1,656,459					*100%*	1,656,459											1,656,459			500,000
	8,086,543		**0**		**0**		**8,086,543**		**0**							**0**	**0**	**8,086,543**	**0**	**0**	**6,500,000**
Light Fleet																					
Transport Strategy & Development	604,475							*100%*	604,475												
VFEL	339,861							*100%*	339,861												
	944,336		**0**		**0**		**0**		**944,336**							**0**	**0**	**0**	**0**	**0**	**0**
Lower Carbon Business																					
Govt Leadership in Renewable Heat	241,131							*100%*	241,131												
Standards and Regulations (including E3)	1,337,364	*95%*	1,270,496					*5%*	66,868							1,270,496			936,202		
Engagement and Information: Low Carbon Business	1,226,024							*100%*	1,226,024												
Process Heat Action Plan	790,729							*100%*	790,729												
Large Energy Users	7,802,567	*59%*	4,603,515	*8%*	624,205			*33%*	2,574,847	(4,216,934)			2,819,735	626,608		3,206,316	1,250,813		2,362,667	1,167,422	
Technology Demonstrations	1,108,990	*42%*	465,776	*5%*	55,450			*53%*	587,764	(285,359)			110,217	86,599		290,634	142,049		214,162	132,578	
Industry Development	710,976							*100%*	710,976												
Public Sector/Crown Loans	613,140							*100%*	613,140												
	13,830,921		**6,339,786**		**679,655**		**0**		**6,811,479**							**4,767,445**	**1,392,862**	**0**	**3,513,031**	**1,300,000**	**0**
Commercial Buildings																					
Commercial Building Performance	647,697							*100%*	647,697												
NABERSNZ	479,500	*80%*	383,600					*20%*	95,900							383,600			282,667		
	1,127,197		**383,600**		**0**		**0**		**743,597**							**383,600**	**0**	**0**	**282,667**	**0**	**0**
Total Expenses	**46,825,000**		**8,629,129**		**679,655**		**8,086,543**		**29,429,672**	**(4,502,293)**	**0**	**(2,670,834)**	**2,929,952**	**713,207**	**2,670,834**	**7,056,788**	**1,392,862**	**8,086,543**	**5,200,000**	**1,300,000**	**6,500,000**
Less Levy expenditure related to commitments made and funded in prior years			4,502,293		0		2,670,834						**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**
17/18 Levy activities expensed in year			4,126,836		679,655		5,415,709														
Add: 17/18 Levy activities contractually committed in year but not expensed in year (funding held in retained earnings)			2,929,952		713,207		2,670,834														
Total cost of 17/18 Levy related activities			**7,056,788**		**1,392,862**		**8,086,543**														
2017/18 Funding breakdown																					
Levy Appropriations			5,200,000		1,300,000		6,500,000														
EECA Baseline Appropriation			1,856,788		92,862		1,586,543														
			7,056,788		**1,392,862**		**8,086,543**														

Table 2: Our overall 2017/18 expenditure

										(as per 16/17 Actuals)						Total Cost with movement in commitments included			Levy funding allocated Pro-Rata (except for PEFM Levy)		
										Commitments b/f			Commitments c/f								
	Total fully allocated cost per project	Electricity Industry Levy activities		GSMEE Levy activities		PEFM Levy activities		Non-Levy related activities		Electricity Industry Levy activities	GSMEE Levy activities	PEFM Levy activities	Electricity Industry Levy activities	GSMEE Levy activities	PEFM Levy activities	Electricity Industry Levy activities	GSMEE Levy activities	PEFM Levy activities	Electricity Industry Levy activities	GSMEE Levy activities	PEFM Levy activities
		%	$	%	$	%	$	%	$							$	$	$	$	$	$
Thermal Envelope																					
VTR and Councils	271,766							*100%*	271,766												
WUNZ:HH Rentals	8,590,326							*100%*	8,590,326												
Warmer Kiwi Homes	337,803							*100%*	337,803												
Energywise	2,146,196							*100%*	2,146,196												
Thermal Performance post 30/06/18	407,810							*100%*	407,810												
	11,753,901		**0**		**0**		**0**		**11,753,901**							**0**	**0**	**0**	**0**	**0**	**0**
Household Energy Use																					
Energywise	919,798							*100%*	919,798												
Energy Star - Closure	119,993							*100%*	119,993												
Standards and Regulations (including E3)	2,204,065	*93%*	2,049,780					*7%*	154,285							2,049,780			1,364,098		
	3,243,856		**2,049,780**		**0**		**0**		**1,194,076**							**2,049,780**	**0**	**0**	**1,364,098**	**0**	**0**
Electric Vehicles																					
Electric Vehicles - CF	5,886,641					*100%*	5,886,641					(2,670,834)			4,242,440			7,458,247			6,000,000
Electric Vehicles - IC	1,846,971					*100%*	1,846,971											1,846,971			500,000
	7,733,612		**0**		**0**		**7,733,612**		**0**							**0**	**0**	**9,305,218**	**0**	**0**	**6,500,000**
Light Fleet																					
Transport Strategy & Development	664,126							*100%*	664,126												
VFEL	206,213							*100%*	206,213												
	870,339		**0**		**0**		**0**		**870,339**							**0**	**0**	**0**	**0**	**0**	**0**
Lower Carbon Business																					
Govt Leadership in Renewable Heat	195,970							*100%*	195,970												
Standards and Regulations (including E3)	1,433,376	*93%*	1,333,040					*7%*	100,336							1,333,040			887,118		
Engagement and Information: Low Carbon Business	1,112,966							*100%*	1,112,966												
Process Heat Action Plan	717,181							*100%*	717,181												
Large Energy Users	7,255,111	*66%*	4,788,373	*3%*	217,653			*31%*	2,249,084	(4,216,934)			3,229,741	749,761		3,801,180	967,414		2,529,627	967,414	
Technology Demonstrations	533,340	*54%*	288,004	*25%*	133,335			*21%*	112,001	(285,359)			218,500	59,591		221,145	192,926		147,168	192,926	
Industry Development	639,470							*100%*	639,470												
Public Sector/Crown Loans	260,280							*100%*	260,280												
	12,147,694		**6,409,417**		**350,988**		**0**		**5,387,289**							**5,355,365**	**1,160,340**	**0**	**3,563,913**	**1,160,340**	**0**
Commercial Buildings																					
Commercial Building Performance	725,261							*100%*	725,261												
NABERSNZ	510,885	*80%*	408,708					*20%*	102,177							408,708			271,989		
	1,236,146		**408,708**		**0**		**0**		**827,438**							**408,708**	**0**	**0**	**271,989**	**0**	**0**
Total Expenses	**36,985,548**		**8,867,905**		**350,988**		**7,733,612**		**20,033,043**	**(4,502,293)**	**0**	**(2,670,834)**	**3,448,241**	**809,352**	**4,242,440**	**7,813,853**	**1,160,340**	**9,305,218**	**5,200,000**	**1,160,340**	**6,500,000**
Less Levy expenditure related to commitments made and funded in prior years			4,502,293		0		2,670,834						OK	OK	OK	OK	OK	OK	OK	OK	OK
17/18 Levy activities expensed in year			4,365,612		350,988		5,062,778														
Add: 17/18 Levy activities contractually committed in year but not expensed in year (funding held in retained earnings)			3,448,241		809,352		4,242,440														
Total cost of 17/18 Levy related activities			**7,813,853**		**1,160,340**		**9,305,218**														
2017/18 Funding breakdown																					
Levy Appropriations (GSMEE capped at actual usage)			5,200,000		1,160,340		6,500,000														
EECA Baseline Appropriation			2,613,853		0		2,805,218														
			7,813,853		**1,160,340**		**9,305,218**														

Electricity Levy

In 2017/18, the electricity levy was used to deliver the following programmes in the business and residential sectors:

- The Equipment Energy Efficiency (E3) programme
- Engagement with large energy using businesses
- Technology demonstration projects
- NABERSNZ

These programmes have been assessed as having a high impact across the market in terms of supporting the uptake of new emerging technologies, energy efficiency, promoting the use of renewables and addressing emissions reductions.

Our work has resulted in the following benefits in 2017/18 to electricity users and generators:

- additional annual electricity savings of 352 GWh per annum
- additional reduction in peak demand of 79 MW
- $31 million worth of savings per annum[1].

Equipment Energy Efficiency (E3) programme

We work with the Australian Department of Environment and Energy on the Equipment Energy Efficiency Programme (E3). The programme works to make residential, commercial and industrial products more energy efficient, through the implementation of minimum energy performance standards (MEPS) and mandatory energy performance labelling (MEPL). This involves: developing standards, developing regulations, compliance and enforcement, partner engagement, and marketing to consumers.

Standards and regulations

Our E3 programme has been highly effective in increasing the electricity efficiency of appliances and products allowed to be sold in New Zealand. As a result, the energy use of commercial and industrial appliances has dropped 4% since 2014 and the annual energy use from residential appliances has decreased by 8%. The reductions in electricity demand, especially at peaks times, has benefited all electricity consumers through the associated reductions in electricity prices.

In 2017/18, we focused on improving standards for LED lighting, domestic and commercial refrigeration, non-domestic fans, and domestic heat pumps. As higher standards are introduced, we can measure the amount of energy saved from the more efficient products sold over the previous year. In 2017/18, we recorded energy savings of 125 GWh from efficient business products and 146 GWh from all residential products. This is a locked-in benefit that will accrue every year they are in use.

Information and compliance

To help consumers and businesses choose energy efficient appliances, EECA ensures regulated products for sale display the correct Energy Rating Label. The Energy Rating Label uses a star rating system to show consumers

[1] Annual saving based on an electricity cost of $0.0879/kWh.

how energy efficient one product is compared to another. This year we surveyed 200 stores across the country and found 97% compliance with disclosure requirements.

Another initiative that makes it easier for people to choose energy efficient appliances is our new Rightware tool, which we launched in June 2018. The tool helps people choose a model that fits their requirements and cost profile by providing running costs on appliances in key consumer product categories.

Over the last 12 months, we also carried out our largest ever appliance testing programme, which included testing of electric storage water heaters, TVs, household fridges and heat pumps against their stated standard. Final test results are expected in 2018/19.

Large Energy Users programme

We have a range of programmes to increase awareness in businesses and public sector organisations, and reduce the barriers to electricity efficiency improvements. We currently have partnerships with businesses that use almost a quarter of the energy used in New Zealand.

In 2017/18, we worked with nearly 130 large energy-using businesses on long-term energy management partnerships. This year we introduced a greater focus on working with the largest energy-related carbon emitters because this is where the greatest potential for reduction exists.

An example of an energy management programme that we promoted in 2017/18 is the two-year programme of improvement undertaken by Christchurch Airport. This programme evolved from an initial energy audit to a programme of continuous improvement, with no inconvenience to customers. Christchurch Airport's on-going efforts to manage energy in its buildings have saved $1.25 million in energy costs since 2013 and reduced carbon emissions from building energy use by 19% per year.[2]

Further case studies can be found on our website: https://www.eecabusiness.govt.nz/resources-and-tools/case-studies/?stage=Live

Technology Demonstrations projects

EECA co-invests in demonstration projects for innovative and emerging electricity technology where there is large potential for replication, where the technology is under-utilised, and where it faces clear barriers to adoption.

In 2017/18, four electricity projects were supported:

- Transcritical refrigeration at Wholesale Distributors Limited
- De-scaling cooling water systems at the administration building of Wellington City Council
- De-scaling cooling water systems at Canterbury District Health Board
- LED grow lights at Biotelliga.

Once successful projects are complete, we promote wider uptake of these technologies in sectors where they can be of benefit. A good example is the Ports of Auckland project, where we co-funded the installation of a new type of LED floodlights into light towers at the wharves and cargo handling areas. To date, this project has

[2] www.eecabusiness.govt.nz/resources-and-tools/case-studies/christchurch-airport-finding-its-sustainability-sweetspot

reduced Ports of Auckland's annual lighting costs by 66% (more than $270,000 in cost savings). Similar projects using LED floodlighting could be replicated at other ports, airports, stadiums, sporting complexes and car parks[3].

Other examples where we promoted electricity technology demonstration projects via video are the:

- Whangarei waste water treatment cogeneration plant https://www.eecabusiness.govt.nz/resources-and-tools/videos-and-webinars/wast-to-energy/,
- Fully electric ride-on lawn movers https://www.eecabusiness.govt.nz/resources-and-tools/videos-and-webinars/clean-and-green-energy-saving-machines/.

NABERSNZ

We work with the commercial building sector to improve the energy performance of new and existing buildings, particularly those owned and/or occupied by the public sector. Our goal is for all commercial buildings in New Zealand to be designed, built and managed to maximise energy efficiency opportunities.

To achieve this goal, we continue to support ongoing improvements in the energy performance of commercial buildings through partnerships with large commercial building owners and tenants in the public and private sectors through the NABERSNZ scheme. NABERSNZ is a system for rating the energy efficiency of commercial buildings to allow businesses to compare their energy performance and identify changes in performance over time. Ratings can be achieved for a whole building, base building or tenancy. The scheme is licensed to EECA and is administered by the New Zealand Green Building Council (NZGBC). Ratings are carried out by trained assessors.

This year 27 ratings were certified, and 12 of these were in the public sector. Since the scheme was introduced, 96 ratings have been certified, with 40% being public sector owned or occupied.

[3] https://www.eecabusiness.govt.nz/resources-and-tools/videos-and-webinars/port-light-saving-money-and-energy/

Table 2: Summary of 2017/18 electricity levy use and delivered benefits

	Consulted proposal		Levy activities funding allocation			Levy expenditure		Savings from electricity efficiency projects completed in 2017/18		
Delivery area	Proposed 2017/18 levy funding allocation	Proposed electricity savings	funding committed to levy projects at 1 July 2017	2017/18 levy funding allocated	2017/18 funding allocated from EECA Baseline	Work completed in 2017/18	Work committed to levy projects at 30 June 2018[4]	electricity savings	Peak demand reduction	Dollar savings
Lower carbon business										
E3 programme	936,202	82 GWh	-	887,118	445,922	1,333,040	-	125 GWh	31 MW	$11m
Large energy users	2,362,667	14 GWh	4,216,934	2,529,627	1,271,553	4,788,373	3,229,741	82 GWh	11 MW	$7.2m
Technology demonstrations	214,162		285,359	147,168	73,977	288,004	218,500			
NABERSNZ	282,667	n/a	-	271,989	136,719	408,708	-	0 GWh	0 MW	$0
Household energy use										
E3 programme	1,404,302	127 GWh	-	1,364,098	685,682	2,049,780	-	146 GWh	37 MW	$12.8m
Total	**5,200,000**	**223 GWh**	**4,502,293**	**5,200,000**	**2,613,853**	**8,867,905**	**3,448,241**	**353 GWh**	**79 MW**	**$31m**

[4] Due to the multi-year nature of many of the programmes, with large projects spanning two to three years with staged payments, a number of the projects will have milestone commitments for some time in out-years. Work committed represents contracted expenditure for eligible electricity efficiency projects to be delivered in future years.

Gas Levy

In 2017/18, the gas levy was used to deliver the following programmes in the business sector:

- Engagement with large energy using businesses
- Technology demonstration projects

These programmes have been assessed as having a high impact across the market in terms of supporting the uptake of new emerging technologies, energy efficiency, promoting the use of renewables and addressing emissions reductions.

While 2017/18 was the first year we received gas levy funding, we have carried out gas efficiency activities in previous years that were funded by non-levy sources. In 2017/18, our gas efficiency initiatives have delivered:

- additional annual gas savings of 75 GWh per annum
- $1.4 million worth of savings per annum[5].

The projects we committed gas levy funding to in 2017/18 have milestone commitments that will be achieved in future years. We did not allocate the full amount of gas levy funding this year and the underspend of almost $140,000 will be returned to levy payers via a deduction to the amount recovered through the gas levy in 2019/20.

Large Energy Users programme

We partner with businesses to reduce the sector's impact on New Zealand's energy-related emissions and increase energy productivity. We have a range of programmes to increase awareness in businesses and public sector organisations, and reduce the barriers to energy efficiency improvements.

In 2017/18, we worked with nearly 130 large energy-using businesses on long-term energy management partnerships. This year we introduced a greater focus on working with the largest energy-related carbon emitters because this is where the greatest potential for reduction exists.

An example of a project we supported is at Refining NZ's Marsden Point Oil Refinery, which is a major user of gas. We co-funded a range of energy efficiency improvements at the refinery, as well as supporting staff to develop ideas for using energy more efficiently and sustainably.[6]

Technology Demonstrations projects

EECA co-invests in demonstration projects for innovative and emerging electricity technology where there is large potential for replication, where the technology is under-utilised, and where it faces clear barriers to adoption.

EECA helped businesses identify new market opportunities by supporting demonstrations of new or under-utilised electricity efficiency technologies.

In 2017/18, two gas projects were supported:

- Taranaki Bioextracts VSEP filtration system
- Palmerston North City Council waste water treatment plant energy efficiency upgrade.

[5] Annual saving based on a gas cost of $18.674/MWh.

[6] See more information on our website: https://www.eecabusiness.govt.nz/resources-and-tools/case-studies/

Table 3: Summary of 2017/18 gas levy use and delivered benefits

	Consulted proposal		Levy activities funding allocation			Levy expenditure		Savings from gas efficiency projects completed in 2017/18	
Delivery area	Proposed 2017/18 levy funding allocation	Proposed gas savings	funding committed to levy projects at 1 July 2017	2017/18 levy funding allocated	2017/18 funding allocated from EECA Baseline	Work completed in 2017/18	Work committed to levy projects at 30 June 2018[7]	Gas savings	Dollar savings
Lower carbon business									
Large energy users	1,167,421	30 GWh	-	967,414	-	217,653	749,761	75 GWh	$1.4m
Technology demonstrations	132,579		-	192,926	-	133,335	59,591		
Total	**1,300,000**	**30 GWh**	**-**	**1,160,340**	**-**	**350,988**	**809,352**	**75 GWh**	**$1.4m**

[7] Due to the multi-year nature of many of the programmes, with large projects spanning two to three years with staged payments, a number of the projects will have milestone commitments for some time in out-years. Work committed represents contracted expenditure for eligible electricity efficiency projects to be delivered in future years.

Petroleum Levy

We want New Zealanders to have their transport needs met using significantly less, and cleaner, energy. This involves the fleet becoming more energy and emissions efficient.

Our work on electric vehicles sits within a cross-government package of measures to accelerate the uptake of electric vehicles. The Government's electric vehicle programme, with industry support and involvement, aims to have 64,000 electric vehicles registered in New Zealand by the end of 2021. There has been exponential growth in the industry and, as of 30 June 2018, there were almost 8,700 electric and plug-in hybrid light vehicles registered. This is ahead of the target of 8,000 by the end of December 2018.

In 2017/18, the Petroleum Levy was used to fund two key programmes:

- Low Emission Vehicles Contestable Fund
- Information campaign

Low Emission Vehicles Contestable Fund

We support early and innovative investment in low-emission vehicles and associated infrastructure by sharing the financial risk. This year we committed to co-invest $6.54 million in new low-emission vehicle initiatives through our low-emission vehicles contestable fund, and saw multi-year projects sufficiently advanced that they met the criteria to draw on nearly $5 million co-investment. In total, we have committed co-funding of $10.1 million to third party funding of $18.8 million. As of 30 June 2018, 13 of the 14 projects allocated funding in 2016/17 had publicly visible infrastructure or vehicles in operation including Waste Management's Electric Vehicle Innovation Hub, Auckland Transports electric buses and the Christchurch electric car sharing scheme Yoogo.

Information campaign

We work to help more New Zealanders choose a low-emissions vehicle over a fossil fuelled vehicle. We have continued to develop and provide independent and authoritative information that dispels myths and motivates people to improve their transport choices.

The electric vehicle web portal (www.electricvehicles.govt.nz) is a comprehensive source of electric vehicle information for consumers. It has experienced a surge in traffic since its launch in September 2016, currently averaging 11,000 visits per month – an increase of over 200% on the previous 11 months.

Our research shows that people need to see, ride or drive an electric vehicle before they'll consider buying one. We have continued to run a programme of outreach events in partnership with the Better New Zealand Trust to give people the chance to get behind the wheel of an electric vehicle. This year we supported 111 community events that saw over 1,300 test drives take place.

Table 4: Summary of 2017/18 petroleum levy use and delivered benefits

	Consulted proposal		Levy activities funding allocation			Levy expenditure		
Delivery area	Proposed 2017/18 levy funding allocation	Proposed outputs	funding committed to levy projects at 1 July 2017	2017/18 levy funding allocated	2017/18 funding allocated from EECA Baseline	Work completed in 2017/18	Work committed to levy projects at 30 June 2018	Outputs delivered in 2017/18
Electric Vehicles								
Information campaign	500,000	25,000 visits to the EV website, and 1,000 test drives taken in an electric vehicle	-	500,000	1,346,971	1,846,971	-	Over 140,000 visits to the EV website and 1,345 test drives were taken in an electric vehicle at 111 EECA-supported community events
Low Emission Vehicles Contestable Fund	6,000,000	Co-fund innovative projects that accelerate the uptake of low emission vehicles in New Zealand	2,670,834	6,000,000	1,458,247	5,886,641	4,242,440	93% of projects allocated co-funding in the first round of the fund (in 2016/17) have publically visible infrastructure or vehicles in place
Total	**6,500,000**		**2,670,834**	**6,500,000**	**2,805,218**	**7,733,612**	**4,242,440**	