We are working to make New Zealand a better place to live - economically, environmentally and socially, through the better use of energy.

Energy Efficiency and Conservation Authority
Te Tari Tiaki Pūngao

Consultation on EECA's 2018/19 levy funding proposal and related work programme

Published on: 16 November 2017
Submissions close: 5pm, 15 December 2017

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 2018/19 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 15 December 2017.**

EECA's 2018/19 levy funding proposal

EECA's activities are funded by the Crown through appropriations of public money. Some of these activities are (indirectly) funded from levies on electricity, natural gas and engine fuels (petrol, diesel, ethanol and biodiesel).

For 2018/19, EECA's proposal is for **$14 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 (37%)
- $1.3 million from the GSMEE levy (9%).

EECA proposes to use the levies to partially fund the following activities in 2018/19 and we welcome submissions on these proposals:

- **Electric Vehicles (EV) Programme:** $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 low emission transport technologies. The key change for the EV Programme in 2018/19 is EECA's proposal to bring forward from future years of the programme an additional $1 million for the contestable fund (compared to 2017/18).
- **The Equipment Energy Efficiency (E3) Programme:** $2,587,871 is sought from the electricity levy and $54,609 from the GSMEE levy to invest in the E3 Programme to develop **business** and **residential** product energy efficiency standards and regulations.
- **Productive low carbon business activities:** $2,124,419 is sought from the electricity levy and $1,054,740 from the GSMEE levy to invest in the **large energy user engagement 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 $206,185 from the electricity levy and $190,651 from the GSMEE levy. This will support demonstration projects for proven, but under-utilised energy efficient technologies and processes.
- **National Australian Built Environment Rating System New Zealand (NABERSNZ):** $281,525 is sought from the electricity levy to invest in the NABERSNZ scheme to improve the energy performance of commercial buildings.

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1 What you need to know to make a submission

What this consultation paper is about

This consultation paper seeks submissions on EECA's levy proposal and draft levy-funded work programme in 2018/19, which covers the period 1 July 2018 to 30 June 2019.

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 31) outlines the legal context for this consultation.

This is the first year EECA is formally consulting under its expanded levy funding arrangements. This follows legislative change made by the enactment of the Energy Innovation (Electric Vehicles and Other Matters) Amendment Act 2017.

The Electricity Authority (EA) will separately consult on their 2018/19 levy-funded appropriations and work programme focus areas—this consultation is planned to commence on 21 November 2017

How to make a submission

You may provide your submission in electronic form, which can be emailed to **levyconsultation@eeca.govt.nz** with "**EECA 2018/19 Levy Consultation**" in the subject line.

You may also make a submission via an online survey available at:
https://www.surveymonkey.com/r/F9DMLDJ

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 intends to 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.

Submission deadline

The consultation period commences on 16 November 2017, and all submissions must be received **by 5:00 pm on 15 December 2017.**

Next steps

EECA will consider all submissions received before presenting our levy funding request for our 2018/19 work programme to the Minister of Energy and Resources in early 2018.

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 Intent 2018 – 2022* and *Statement of Performance Expectations 2018 – 2019* that will be published in mid-2018.

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.**

2 About EECA and our strategic direction

2.1 Introduction

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

There is a role for government to ensure New Zealand is well positioned to improve energy productivity and efficiency, to take advantage of emerging technologies, and to assist consumers and businesses to make positive and meaningful contributions towards emissions reductions when using energy.

These goals are reflected in the Government's primary statement of energy policy – the *New Zealand Energy Strategy 2011-2021* (NZES), which sets out key priorities in the efficient use of energy, development of our renewable energy resources and supporting new technologies.[1]

The domestic and global energy environment has evolved significantly since the introduction of the NZES in 2011. Following ratification of the Paris Agreement on Climate Change in October 2016, New Zealand has made its first nationally determined contribution to reduce its greenhouse gas emissions by 30 per cent below 2005 levels by 2030.

This year, the Energy Innovation (Electric Vehicles and Other Matters) Amendment Act 2017 (the Act) was passed to give effect to government commitments to improving energy efficiency and addressing climate change in carbon-intensive sectors, particularly in process heat and transport.

The Act allows EECA to utilise levy funding from two additional energy levies (the PEFM and GSMEE levies) to undertake and deliver programmes that align with our statutory function, and which will be guided by the *New Zealand Energy Efficiency and Conservation Strategy* (NZEECS). The Electricity Industry Act 2010 will also continue to allow EECA to utilise funding from the electricity levy.

The New Zealand Energy Efficiency and Conservation Strategy 2017-2022

To reflect the changing global and domestic energy environment, the NZEECS was refreshed this year.[2]

The NZEECS is the guiding document for EECA's strategic direction over the next five years. 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.

[1] *New Zealand Energy Strategy 2011 -2021 – Developing our energy potential*: http://www.mbie.govt.nz/info-services/sectors-industries/energy/documents-image-library/nz-energy-strategy-lr.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

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.

There are three NZEECS priority areas to focus on:

- **Renewable and efficient use of process heat** – with a target to decrease industrial emissions intensity of at least 1% per annum on average between 2017 and 2022.
- **Efficient and low-emissions transport** – with a target of electric vehicles making up 2% of the vehicle fleet by the end of 2021.
- **Innovative and efficient use of electricity** – with a target of 90% of electricity being generated from renewable sources by 2025 (in an average hydrological year), providing security of supply is maintained.

2.2 Benefits from EECA's activities

Promoting energy efficiency and renewable energy

Improving energy efficiency is a low-cost way to support economic growth by allowing New Zealand to obtain greater benefits from its resources over the long term. Improved energy efficiency increases energy productivity, and this supports all 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 affordable for consumers, and delivered cost-effectively to households and businesses.

Increasing the use of renewable energy also makes better use of our abundant renewable resources and reduces our reliance on fossil fuels, making us more resilient to fluctuating commodity prices and contributing towards reducing our energy-sector emissions.

Reduced energy costs

The most direct benefit to consumers from energy efficiency are 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.[3]

In an efficient and competitive market, less energy will be used, and this results in lower energy prices. This produces lower costs for all energy users and comprises a mix of economic benefits and wealth

[3] EECA's analysis using: *2015 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.

transfers. 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 helps to control these costs for the benefit of all business and residential users, particularly when reducing peak demand.[4]

A 2015 study of the impact of EECA's levy-funded electricity efficiency activities indicated savings to that date would reduce the average wholesale price through 2016/18 by $4.5/MWh (or $11.6/MWh, if future savings were included).[5] Since 2006, EECA estimates our electricity efficiency programmes have delivered cumulative savings of 2,519 GWh (9.1 PJ).

Reducing greenhouse gas emissions

Energy use and production cause around 40.5% of New Zealand's gross emissions, primarily through using fossil fuels (based on 2015 data recently submitted to the United Nations Framework Convention on Climate Change in May 2017).[6]

While 84.8% of our electricity generation in 2016 came from renewable resources (increasing from 80.8% in 2015),[7] the emissions from electricity generation is still around 4 - 5 Mt CO_2e per annum (4.89 Mt CO_2e in 2015, accounting for 6% of New Zealand's total emissions), meaning that using our electricity efficiently can present opportunities to reduce our emissions.[8]

Also, New Zealand's growing transport energy needs are almost exclusively met by petroleum-derived fossil fuels, and 60% of our industrial and commercial heat needs are met by the same.[9] There are significant opportunities for New Zealand to reduce its emissions associated with energy use, and thereby help meet our Paris Agreement target.

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

[5] Energy Link, *Electricity Price Impact of the EECA Levy-funded Electricity Efficiency Programmes: Updated 2015,* (October 2015): https://www.eeca.govt.nz/assets/Resources-EECA/energy-link-report-2015.pdf

[6] Ministry for the Environment, *New Zealand's Greenhouse Gas Inventory 1990 – 2015*, (May 2017) http://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/FINAL%20GHG%20inventory%20-%2025%20May.pdf

[7] The Ministry for Business, Innovation & Employment (MBIE), *Energy in New Zealand 2017*: http://www.mbie.govt.nz/info-services/sectors-industries/energy/energy-data-modelling/publications/energy-in-new-zealand/documents-images/energy-in-nz-2017.pdf

[8] MBIE, *New Zealand Energy Sector Greenhouse Gas Emissions 2015 Calendar Year Edition* (May 2017): http://www.mbie.govt.nz/info-services/sectors-industries/energy/energy-data-modelling/publications/energy-greenhouse-gas-emissions/documents-image-library/NZ%20Energy%20Greenhouse%20Gas%20Emissions.pdf

[9] EECA analysis using the *Energy end use database*: https://www.eeca.govt.nz/resources-and-tools/tools/energy-end-use-database/; Ibid at above n 7, MBIE *Energy in New Zealand 2017.*

In 2016/17, our electricity efficiency programmes have conservatively resulted in 45,055 tonnes CO_2e being avoided per annum, and an estimated cumulative reduction of 324,195 tonnes CO_2e since 2006.[10]

2.3 EECA's investment approach

EECA designs and implements programmes that meet our statutory role, government objectives and the NZEECS priority areas.

Our programmes are developed based on considerations of the following criteria:

- **The opportunity is understood** – we identify the sectors, technologies and practices across New Zealand where there is realisable potential for energy efficiency improvements that will deliver benefits in excess of the costs to achieve them.
- **The market failures and barriers are understood** – we identify the barriers to investment by households and businesses to realise this potential. We only intervene where there are cost-effective benefits that would not otherwise be achieved, and where there is a role for government to do so.
- **The programmes are effective** – we assess the success of our programmes to ensure these are addressing the barriers and achieving their intended outcomes.

The tools EECA uses to achieve our desired outcomes include:

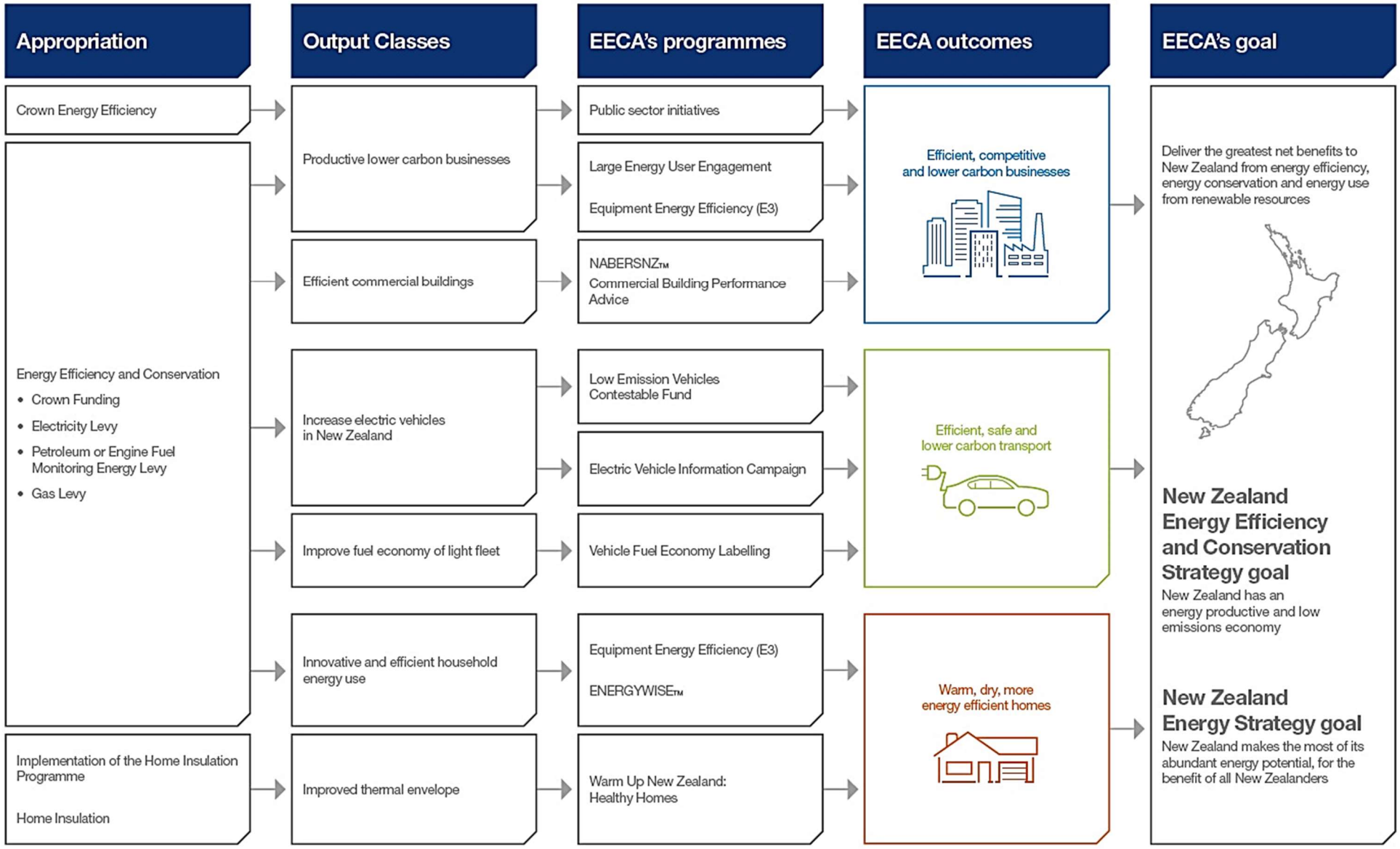
- Information and advice – targeting consumer and business needs;
- Incentives – co-funding arrangements to help build capability, encourage action, and leverage investment;
- Regulation and standards – to optimise market penetration in energy efficient products, appliances and practices; and
- Technical demonstrations, research and development – to support uptake and innovative capability.

Part 3 of this consultation paper (below) presents EECA's 2017/18 outcome framework. This summarises EECA's investment approach to delivering the following three key outcomes for New Zealand, which broadly align with the NZEECS priorities:

- Efficient, competitive, lower carbon businesses;
- Efficient, safe and lower carbon transport; and
- Warm, dry, more energy efficient homes.

[10] 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

3 EECA's 2017/18 outcome framework



4 How EECA is currently funded?

4.1 EECA's funding

EECA's activities are funded by the Crown from general appropriated funding and levy funding collected on electricity, natural gas, and engine fuels (petrol, diesel, ethanol and biodiesel). **This paper consults on the level of EECA's levy funding proposal only.**

The following appropriations within Vote Business, Science and Innovation make up EECA's funding in 2017/18:

- **Appropriation – Energy Efficiency and Conservation:** This appropriation includes our non-levy Crown funding and funding from the three energy levies. It makes up the majority of EECA's funding ($29.584 million in 2017/18) and is intended to fund our core statutory function to encourage, promote, and support energy efficiency, energy conservation and renewable energy.
- **Appropriation – Implementation of the Home Insulation Programme**: intended to fund the administration and implementation of the Home Insulation Programme – Warm Up New Zealand: Healthy Homes (WUNZ: HH) (Note: programme is scheduled to end on 30 June 2018).
- **Appropriation – Home Insulation:** intended to fund the delivery of energy savings and health benefits to households, through the WUNZ: HH Programme.
- **Appropriation – Crown Energy Efficiency:** this capital appropriation is intended to achieve the delivery of energy efficiency savings in the public sector by making available Crown loans.

The contributions to EECA's 2018/19 proposed budget and a comparison to the 2017/18 actual budget is shown below:

	($000)	**Proposal** ($000)
EECA's funding source	**2017/18**	**2018/19**
Non-departmental output expenses appropriation		
Crown funded energy efficiency and conservation initiatives	16,584	16,584
Implementation of the Home Insulation Programme (WUNZ: HH)	500	0
Electricity levy funded energy efficiency and conservation initiatives	5,200	5,200
PEFM levy funded energy efficiency and conservation initiatives	6,500	7,500
GSMEE levy funded energy efficiency and conservation initiatives	1,300	1,300
Non-departmental other expenses – multi-year appropriation		
Home Insulation (WUNZ: HH)	13,678	0
Total operational appropriation	**43,762**	**30,584**
Other income	933	933
Total operational funding for the year	**44,695**	**31,517**
Expenses funded from retained earnings	2,130	500
Total expenses for the year	**46,825**	**32,017**
Non-departmental capital expenses		
Crown Energy Efficiency	2,000	2,000
Total capital funding	**2,000**	**2,000**

4.2 Recent changes to levy funding

Cabinet has agreed to EECA receiving up to $17.5 million each year in levy funding for its activities.[11]

In 2016, the Ministry of Business, Innovation and Employment (MBIE), on behalf of the Minister and Energy and Resources, consulted with the public on a proposal to expand the purpose of three existing energy levies (the Electricity Industry Levy, and the Gas Safety, Monitoring and Energy Efficiency (GSMEE) and the Petroleum or Engine Fuel Monitoring (PEFM) levies) to enable EECA to undertake a broader range of activities using levy funding – in particular to better respond to the NZEECS priorities and focus on opportunities where the greatest gains can be made in reducing emissions.

Twenty out of twenty six submitters were supportive of the change to levy funding. There was strong support to spread the cost of activities across the three energy levies. A general theme in submissions was the importance of the levies being paid by the causers of a problem or beneficiaries of the activities undertaken by EECA.

In light of the feedback, Cabinet agreed that the Crown should recover levy funding, for some of EECA's activities, from all three energy levies.

The Energy Innovation (Electric Vehicles and Other Matters) Amendment Act 2017 has now expanded the purpose of each levy to enable the partial recovery of the costs of EECA's activities related to energy efficiency, energy conservation, and the use of renewable sources of energy. This now provides EECA with access to levy sourced funding for a broader range of activities that meet our statutory function than was available when levy funding was confined to the Electricity Industry Levy alone.

4.3 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.

This Electricity Industry Levy funds the Electricity Authority (EA).

Since 1 July 2017, section 128 of the Electricity Industry Act 2010 also provides that the Electricity Industry Levy can fund a portion of the costs of EECA in performing its functions and exercising its powers and duties under the Energy Efficiency and Conservation Act 2000.

The EECA portion of the levy is collected from electricity industry participants that purchase electricity from the wholesale market (which are typically electricity retailers) at a rate of $0.315/MWh purchased. This levy is passed on to consumers and this is estimated to cost an average of $2.32 per household each year.

[11] Cabinet has approved up to $17.5 million of levy funding each year for EECA [Cab Min (07)12/1(56) refers].

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 New Zealand Customs at the port of import, whereas imported oil is levied at the refinery once processed into the finished product.

It funds fuel-quality and safety monitoring costs, and the costs of complying with our International Energy Agency (IEA) obligations regarding fuel stocks.

Since 1 July 2017, section 14(2A) of the Energy (Fuels, Levies and References) Act 1989 has provided that the PEFM levy can be recovered for EECA to perform its functions and exercising its powers and duties under the Energy Efficiency and Conservation Act 2000.

The PEFM levy increased from 0.2 cents per litre to 0.3 cents per litre from 1 July 2017.

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 use as a feedstock or for the generation of electricity or is liquefied petroleum gas.

The levy funds certain WorkSafe and MBIE services related to the electricity and gas industries, including inspections, monitoring and the dissemination of safety information.

From 1 July 2017, section 14(2A) of the Energy (Fuels, Levies and References) Act 1989 provides that this gas levy can be recovered for EECA to perform its functions and exercising its powers and duties under the Energy Efficiency and Conservation Act 2000.

The levy, now called the Gas Safety, Monitoring and Energy Efficiency (GSMEE) levy, increased from 2 cents per gigajoule to 3.8 cents per gigajoule from 1 July 2017.

iv. Energy levy proportions

EECA receives only a proportion of the three energy levies for its work programme. The total levy amounts estimated to be collected for 2017/18 are:

Electricity Industry Levy	Gas Safety, Monitoring and Energy Efficiency levy	Petroleum or Engine Fuel Monitoring levy
$73.9 million for the Electricity Authority (EA)	$1.6 million for MBIE and WorkSafe	$12.5 million for MBIE and WorkSafe
$5.2 million for EECA	$1.3 million for EECA	$6.5 million for EECA
Total $79.1 million	**Total**: $2.9 million	**Total**: $19 million

5 Proposed levy funded activities in 2018/19

Feedback from stakeholders last year

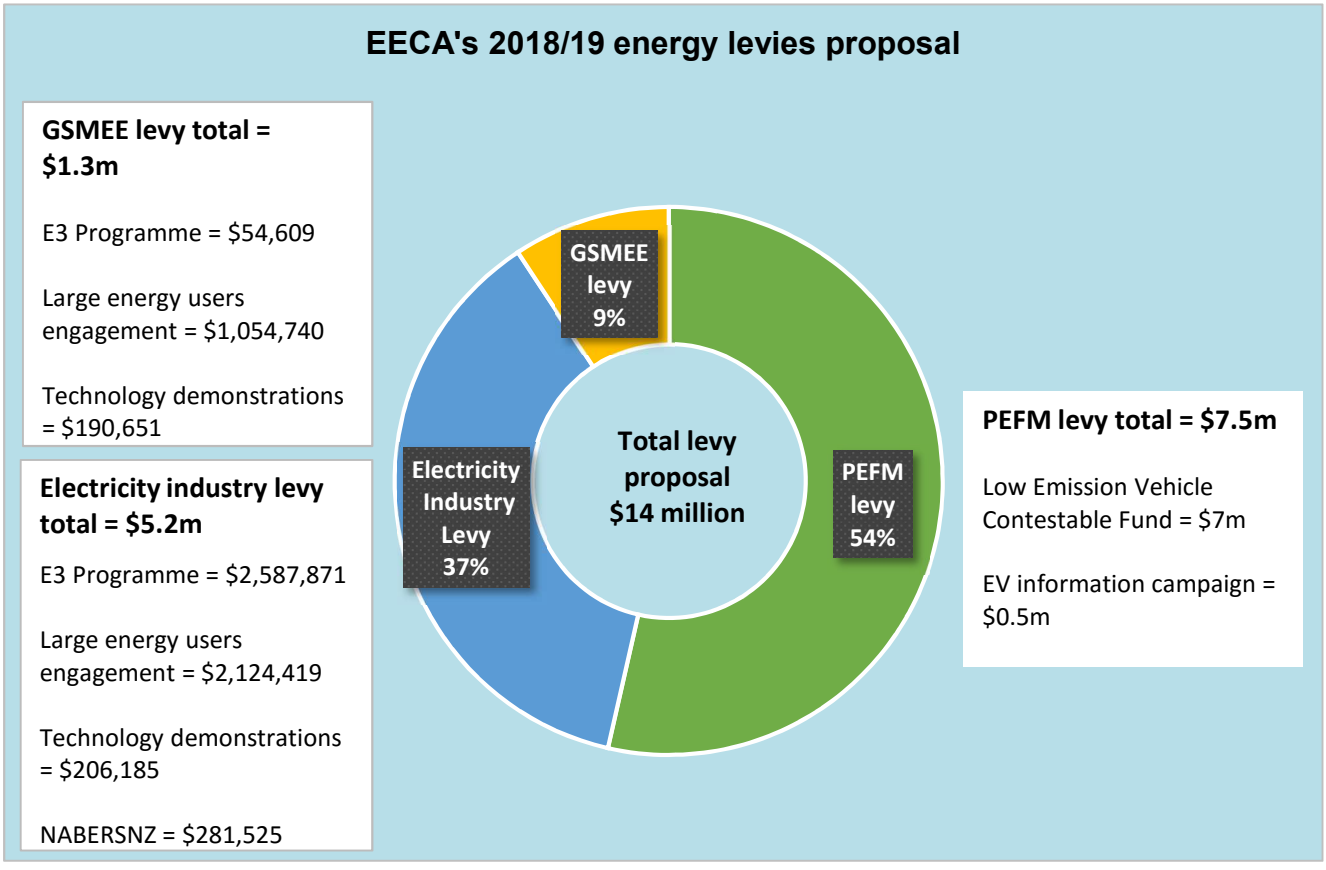
In response to last year's feedback from levy stakeholders, this year EECA is providing more detailed information on the programmes that will be funded from the three energy levies, the expected outputs and benefits these will deliver, and the need for each programme. To ensure transparency in the use of levy funding for programmes, EECA has also provided a link between those groups being levied and whether they benefit from, or cause a need for, the levy-funded programme.

In addition, EECA has 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 (refer to Part 6 from page 28).

If you have any questions or feedback on the contents of this consultation paper, please include this information in your submission when emailing: **levyconsultation@eeca.govt.nz.**

EECA's levy funding proposal in 2018/19

For 2018/19, EECA's levy funding proposal is **$14 million** from the three energy levies at the following proportions and allocations:



Please note that in Appendix 3 (page 35) – *Table of EECA's proposed 2018/19 draft work programme and forecasted budget* – that EECA is not seeking to recover 100% of the costs of levy-related activities from the levies. We are instead proposing to recover 71% of the total costs of electricity-related programmes from the electricity levy, 71% from the GSMEE levy, and 81% from the PEFM levy. The balance of the costs of the programmes will be covered by EECA's baseline appropriation.

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-funding programmes is $18.45 million, but Cabinet has only made provision for EECA to recover $17.5m from the levies, so we cannot fully recover all assessed costs in any case.
- We are confident that bringing forward funding for the Low Emission Vehicles Contestable Fund from the PEFM levy will deliver additional value to New Zealand. Any proposed increases to funding from the electricity and GSMEE levies would only occur once levy-funded programmes have been fully aligned to meet NZEECS objectives and completion of the process heat action plan.

5.1 Electric Vehicles Programme

New Zealand's transportation is almost entirely powered by fossil fuels and is responsible for 18% of the country's gross emissions (40.9% of our energy-related emissions).[12] In 2016, domestic transport had accounted for 82% of demand from oil products.[13]

The Electric Vehicles (EV) Programme was announced by the Government in 2016, and includes a package of measures to accelerate the uptake of EVs. EECA is responsible for delivering two components of the programme, which we propose to part-levy fund in 2018/19 – **the Low Emission Vehicles Contestable Fund** and **EV information campaign.**

The goal is to double the number of registered EVs in New Zealand every year to reach 64,000 by the end of 2021.

Low Emission Vehicles Contestable Fund

EECA is responsible for administering a contestable fund for innovative industry and government projects that promote, enable and/or accelerate the uptake of electric and other low emission vehicle technologies that make use of our renewable energy advantage.[14]

EV information campaign

In 2016, the Government also announced it will commit $1 million per year (over five years) to fund an information campaign for EVs.[15] EECA leads the information campaign, which is aimed at engaging and exciting New Zealanders about EVs and overcoming knowledge barriers.

Key outputs from the EV Programme

The expected outputs for the **contestable fund** in 2018/19 include:

- Co-investing up to $7.0 million in projects that promote and support the uptake of low emission vehicle technologies;

[12] Ministry for the Environment, *New Zealand's Greenhouse Gas Inventory 1990 – 2015*, (May 2017), at above n 6.

[13] The Ministry for Business, Innovation & Employment, *Energy in New Zealand 2017*, at above n 7.

[14] 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/

[15] *Electric vehicle information campaign launched*, September 2016: https://www.beehive.govt.nz/release/electric-vehicle-information-campaign-launched

- Completing at least one funding round;
- Eligible applications are received for 150% of available funds; and
- 80% of projects allocated funding in previous year(s) have publicly visible infrastructure or vehicles in operation.

EECA measures the success of the funding by evaluating how the individual projects contribute to the contestable fund's overarching objectives. We closely monitor the progress of all funded projects and will evaluate their performance in subsequent years.

For the **EV information campaign**, the expected outputs in 2018/19 are:

- Online videos and publishing guidance information on EECA's websites, social media channels and in brochures about EVs;
- Updating and maintaining the public EV website: https://www.electricvehicles.govt.nz;
- Sponsoring events and supporting EV advocates to undertake community outreach activities;
- Administering and encouraging an '*EV Drive the Future*' logo and tagline to be used by multiple partners;
- 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 (e.g. EV battery report).

Key benefits

The EV Programme helps New Zealanders understand and embrace the new technology, and supports 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.

The information campaign will promote, normalise and raise awareness of EVs to accelerate the uptake of the technology.

For the contestable fund to attain greater value-for-money, applicants are required to co-fund their projects. EECA has directly committed $6.36 million of funding to date, while successful recipients have contributed over $18 million in additional private funding across 29 projects. This has led to over $24 million being invested in the emerging EV market in the first two rounds of funding.

2018/19 levy funding proposed for EV Programme

In 2018/19, 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.

The key change for the EV Programme in 2018/19 is EECA's proposal to bring forward from future years an additional $1 million for the contestable fund (compared to 2017/18). This will make more funding available in 2018/19 to get more projects underway earlier, when investment is likely to have greater impact in accelerating uptake and can support the government target of having 64,000 EVs registered by 2021. Bringing forward $1 million to 2018/19 will mean less funding will be required and available in the final year of the contestable fund in 2020/21.

EV Programme 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 is increasing. EECA proposes to fund the two components of the EV Programme from the PEFM levy paid by 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.

Picture above: Support from the contestable fund has helped Foodstuffs import 28 electric vans to be used by New World, PAK'nSAVE and Four Square.

5.2 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.[16] 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 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.

Key outputs from the E3 Programme

The expected outputs for the E3 Programme in 2018/19 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;
- Leading the development of trans-Tasman E3 projects where they are a high priority to New Zealand (e.g. commercial refrigeration and hot water cylinders); and
- Evaluating programme benefits.

EECA is currently working on new systems and communications (industry and consumer) to ensure smooth implementation of new or revised regulations (subject to Ministerial approval) for air conditioners, commercial refrigeration, domestic fridges and freezers, LED lighting and non-domestic fans that are anticipated to flow into 2018/19.

[16] 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/

EECA will also continue or commence investigative work through the E3 Programme on new and revised regulations for domestic hot water systems, commercial lighting, building chillers, television, and gas boilers.[17]

Key benefits

Since 2002, around 60 million business and residential products have been sold under the E3 Programme to date – delivering energy savings of 27.8 PJ, emissions reduction of 1.0 Mt CO_2e, and representing savings of $691 million in national benefit.

The key estimated benefits for this programme in 2018/19 include:

- Electricity savings of 209 GWh p.a.
- Carbon emissions reduction of 29.85 Kt CO_2e p.a.
- National benefit of $18.392 million p.a.

2018/19 levy funding proposed for E3 Programme

In 2018/19, EECA is seeking $2,587,871 sourced (indirectly) from the electricity levy and $54,609 from the GSMEE levy to part-fund the E3 Programme. These levy funding amounts comprise of the following:

- $1,552,723 sourced (indirectly) from the electricity levy for developing **residential** energy efficiency products standards and regulations; and
- $1,035,148 sourced (indirectly) from the electricity levy and $54,609 from the GSMEE levy for developing **business** energy efficiency products standards and regulations.

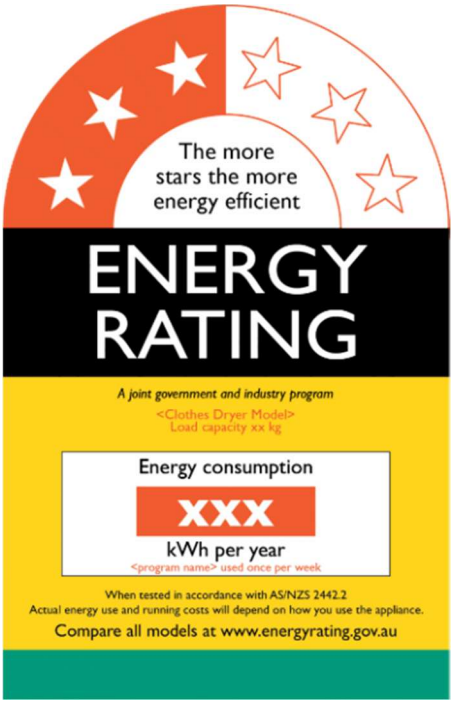
E3 Programme linkage to levy funding

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 programme effectively lowers overall energy demand (particularly with 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.

[17] 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.

A small component of the E3 Programme is proposed to be funded under the GSMEE levy in 2018/19 to support investigative work around new possible MEPs on business products (e.g. gas boilers), which can improve gas efficiency and reduce associated emissions.



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

5.3 Productive low carbon business activities

Large energy user engagement programme

Energy use by businesses (excluding transport) accounts for approximately 62% of New Zealand's total energy use, and more than 55% of our energy-related emissions. [18] 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 to prioritise the areas of greatest potential for energy savings and emission reductions.[19] We facilitate access to tailored advice and services for large energy users across New Zealand, which leads to long-term solutions to energy management challenges 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.

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 because the results can be uncertain, and this can impact on performance, consumer satisfaction and overall business competitiveness.

EECA's co-investment in technology demonstrations reduces the risks, and 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.[20] The programme also includes *process changes* that deliver energy efficiency or promote technologies that use renewable energy.

As an example, EECA recently supported the installation of the innovative Vari-cool milk chilling system at three farms, which improved milk quality and resulted in electricity cost savings. Since the completion of

[18] The Ministry for Business, Innovation & Employment, *Energy in New Zealand 2017*, at above n 7; and the Ministry for the Environment, *New Zealand's Greenhouse Gas Inventory 1990 – 2015*, (May 2017), at above n 6.

[19] 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/

[20] 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/

these demonstration projects, the technology has achieved widespread acceptance across the dairy industry.[21]

Picture above: The Vari-cool milk chiller was developed by Hamilton Company Coolsense. EECA co-funded the demonstration of the technology, which is being successfully adopted across the dairy industry.

Key outputs for low carbon business activities

The expected outputs for the **large energy user engagement programme** in 2018/19 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 (with a primary focus on process heat systems);
- Support and funding for energy audits, operational efficiency improvements such as boiler tuning, energy monitoring and targeting, and optimisation of critical energy systems;
- Training and industry development; and
- Provision of energy management information, resources and advice.

[21] Please visit the following webpage for more information on this case study: https://www.eecabusiness.govt.nz/resources-and-tools/case-studies/vari-cool-chilling-sysyem/

For the **technology demonstration programme**, the expected outputs in 2018/19 include:

- Providing co-funding to demonstrate proven, yet under-utilised energy efficient technologies or processes, with the aim of promoting at least four projects to increase 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.

Key benefits

The key estimated benefits for the **large energy user engagement programme** in 2018/19 include:[22]

- Electricity savings of 12 GWh p.a.
- Gas savings of 28 GWh p.a.
- Carbon emissions reduction of 7,600 tonne CO_2e p.a.
- Cost savings of $2 million p.a.

For the **technology demonstration programme**, the key estimated benefits in 2018/19 include: [23]

- Electricity savings of 1.2 GWh p.a.
- Gas savings of 5 GWh p.a.
- Carbon emissions reduction of 1,200 tonne CO_2e p.a.
- Cost savings of $250,000 p.a.

2018/19 levy funding proposed for productive low carbon business activities

In 2018/19, EECA is proposing to seek $2,330,604 sourced (indirectly) from the electricity levy and $1,245,391 from the GSMEE levy to part-fund our productive low carbon business activities. These levy funding amounts comprise of the following:

- $2,124,419 sourced (indirectly) from the electricity levy and $1,054,740 from the GSMEE levy for the **large energy user engagement programme**; and

[22] Benefits from the low carbon business activities are verified through energy saving reports received from partnering businesses as milestones are completed.

[23] Ibid, as above n 22.

- $206,185 sourced (indirectly) from the electricity levy and $190,651 from the GSMEE levy for the **technology demonstration programme.**

Productive low carbon business activities linkage to levy funding

EECA proposes that the electricity levy part-fund the large energy user engagement and technology demonstration programmes.

Electricity efficiency is achieved by these programmes, resulting in demand reduction and downward pressure on wholesale prices.[24] 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/levy payers.[25]

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. EECA's work in promoting the efficient use of gas through boiler tuning, energy system optimisation and equipment upgrades through the two programmes, will contribute towards lowering costs and creating efficient, higher productive and lower carbon businesses.

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. For instance, EECA's technology demonstration programme recently supported the installation of ozone equipment at a commercial laundry business, which resulted in reduced hot water use that would otherwise require natural gas for heating.[26]

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 for those activities where there are no viable lower-emission alternatives.

[24] Energy Link*, Electricity Price Impact of the EECA Levy-funded Electricity Efficiency Programmes:* Updated 2015, (October 2015), at above n 5.

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

[26] NZ Herald, *Using ozone for laundry a gas,* http://www.nzherald.co.nz/eeca/news/article.cfm?c_id=1504242&objectid=11904015

5.4 National Australian Built Environment Rating System New Zealand (NABERSNZ)

EECA works with the wider building sector to contribute towards the outcome of having all commercial buildings in New Zealand to be designed, built and managed with optimal energy use, which provides highly productive environments for the occupants. The easiest way to do this is to maximise the uptake of cost-effective energy efficiency opportunities.

EECA delivers ongoing improvements in the energy performance of commercial buildings by providing information to large energy users and implementing the *NABERSNZ* scheme – a system for rating the energy efficiency of existing and new office buildings, and identifying opportunities for implementing building energy performance improvements.[27] Assessing and improving the energy performance of commercial office buildings can improve their value and desirability for both investors and prospective tenants, and reduce energy costs and associated emissions.

Key outputs for NABERSNZ

The expected output for the NABERSNZ scheme in 2018/19 is to increase the number of existing commercial offices that have NABERSNZ ratings, and which implement building energy performance improvements.

Key benefits

The key estimated benefits for NABERSNZ in 2018/19 includes:

- Electricity savings of 1.6 GWh p.a.
- Carbon emission reductions of 200 tonne CO_2e p.a.
- Cost savings of $270,000 p.a.

2018/19 levy funding proposal for NABERSNZ

In 2018/19, EECA is seeking $281,525 sourced (indirectly) from the electricity levy to part-fund the administration of NABERSNZ.

This year, EECA is reviewing its strategy for influencing the energy efficiency of commercial buildings, which will further inform our 2018/19 priorities.

Linkage to electricity levy funding

EECA proposes to use the electricity levy to part-fund the NABERSNZ scheme because the efficient use of electricity from improved commercial building performance contributes towards overall electricity system-wide benefits for all consumers/levy payers, including reduced energy prices and network infrastructure costs.

[27] You can find out more information about the NABERSNZ certified ratings by visiting the following webpage: https://www.eecabusiness.govt.nz/standards-ratings-and-labels/nabersnz-certified-rating/

Picture above: Argosy received a five-star NABERSNZ rating (out of six) for its Stout Street building in Wellington - presently occupied by the Ministry for Business, Innovation and Employment (MBIE). The building received a retrofit in 2013 - 14, and includes energy efficient lighting, an air-to-air heat recovery system, and systems for monitoring energy use.

5.5 Summary of EECA's proposed 2018/19 levy-funded programmes

EECA Intervention	2018/19 levy request		
	PEFM levy	Electricity Industry Levy	GSMEE levy
Low Emission Vehicles Contestable Fund	$7.0 million	-	-
EV information campaign	$0.5 million	-	-
E3 Programme – *Residential* products energy efficiency standards and regulations	-	$1,552,723	-
E3 Programme – *Business* products energy efficiency and standards regulations	-	$1,035,148	$54,609
Large energy user engagement programme	-	$2,124,419	$1,054,740
Technology demonstration programme	-	$206,185	$190,651
NABERSNZ	-	$281,525	-
Energy levy total	**$7.5 million**	**$5.2 million**	**$1.3 million**
Total levy funding proposal for 2018/19	**$14 million**		

6 EECA's work programme

6.1 2018/19 draft work programme

In 2018/19, EECA will largely continue the programmes we are currently delivering in 2017/18. There are some funding adjustments for proposed levy-funded programmes as outlined in Part 5 (above) of this consultation paper.

The Warm Up New Zealand: Healthy Homes insulation programme is the only programme scheduled to finish in 2018/19.[28] The programme is not funded by the levies and does not feature in the 2018/19 draft work programme.

EECA reviews its work programme each year against our statutory purpose, current government priorities, and the levy guidelines set out by Cabinet.[29] EECA's work programme and its indirectly levy-funded investments will adapt over time to ensure our work stays current with new technologies, market changes and continues to deliver value for New Zealand in its energy use.

The table at Appendix 3 (page 35) presents EECA's proposed 2018/19 draft work programme and forecasted budget, including both proposed levy and non-levy funded programmes.

The table should be read in conjunction with the ***Notes on EECA's financial tables*** at Appendix 2 (page 32). These notes explain EECA's calculation of the levy funding allocation for each programme.

All EECA's levy-funded programmes are partly met from non-levy-funding to maximise our investments in opportunities that may arise each year.

EECA will take into account the following considerations before finalising our 2018/19 draft work programme and requesting the Minister of Energy and Resources' approval for our levy appropriation in early 2018:

- Feedback arising from this consultation;
- the policy priorities of the new Government; and
- our assessment of the optimal investment mix across the various investment areas.

6.2 EECA's current 2017/18 work programme

In the current year, EECA is delivering on the refreshed NZEECS priorities and undertaking a broader range of activities using levy funding, while continuing to deliver activities which align with our statutory purpose under the Energy Efficiency and Conservation Act 2000.

[28] The *Warm Up New Zealand: Healthy Homes* programme is scheduled to finish at the end of June 2018.

[29] Refer to EGI-16-SUB-0197, http://www.mbie.govt.nz/publications-research/publications/energy/egi-cabinet-paper-levy-policy-decisions-final-sept-2016-redacted.pdf

Our current 2017/18 work programme focuses on the following investment areas:

- Productive lower carbon businesses
- Efficient commercial buildings
- Increasing electric vehicles in New Zealand
- Improving the fuel economy of light fleet
- Innovative and efficient household energy use
- Improved thermal envelope.

There is a need for EECA to give more focus to the transport and industrial sectors, and to meet government objectives of efficient use of energy and diverse resource development. This includes developing renewable energy resources and supporting new technologies, which contribute to meeting our climate change objectives (Refer to EGI-16-SUB-0197).

EECA's work with large energy users is currently being refocused to prioritise efforts in reducing emissions from large gas and coal users. This will include working with MBIE on possible process heat options aimed to improve the efficiency of existing plant, and to encourage investment in efficient and renewable energy plant.

Appendix 4 (page 36) presents a table on the current budget expenses for EECA's full 2017/18 work programme, including work not funded from the energy levies. Please refer to the ***Notes on EECA's financial tables*** at Appendix 2 (page 32) when reviewing this table.

6.3 Report for 2016/17 on electricity efficiency levy-funded programmes

In 2016/17, EECA received levy funding from the electricity levy for the following electricity efficiency activities:

- The Equipment Energy Efficiency (E3) Programme to improve the electricity efficiency of available residential and business products through standards and regulations; and
- Business engagement activities targeting electricity efficiency in public sector organisations and the country's largest energy using businesses.

Through these initiatives, EECA achieved electricity savings of 319 GWh per annum (equating to savings of over $28 million per annum[30]), and reduced peak demand on generation and transmission lines and systems by 71 MW. These outcomes were achieved at a cost to the levy of 0.52 c/kWh.[31] A detailed annual report on the outcomes of EECA's electricity efficiency levy-funded activities for 2016/17 is provided at Appendix 5.[32]

[30] Annual savings based on electricity cost of $0.0879/kWh.

[31] Levelised costs of energy savings to EECA over 10 years, discounted at 6%.

[32] EECA did not receive funding from the PEFM and GSMEE levies in 2016/17.

7 Consultation questions

1) What kinds of engagement have you or your organisation had with EECA?
2) What forms of energy do you or your organisation use, and which 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 2018/19 will request funding from the three energy levies set out in question 2. Do you support EECA's levy proposal for $14 million in 2018/19?
4) Do you support the proportions EECA has requested across the three energy levies?
5) Which of EECA's levy-funded activities is of most interest to you:
    - Electric Vehicles (EV) Programme
    - Equipment Energy Efficiency (E3) Programme
    - Large energy user engagement programme
    - Technology demonstration programme
    - NABERSNZ
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 2018/19, 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 2018/19 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 any person who may be significantly affected by our proposed appropriation of public money from the Electricity Industry Levy for the coming financial year:

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 any person who may be significantly affected by our proposed appropriation of public money from the GSMEE and PEFM levies for the coming financial year:

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 2017/18 and 2018/19 work programmes

The tables at Appendices 3 and 4 (below) of this consultation paper outlines the financial projections for EECA's 2017/18 and 2018/19 work programmes based on current priorities.

As noted earlier in this paper, the final decision on the 2018/19 levy proposal will be influenced by many factors, including submissions received through this consultation process.

When reviewing the 2017/18 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. The best, and most recent, example of this is the Low Emission Vehicles Contestable Fund.

In December 2016, the EECA Board approved around $3 million of co-investments under the contestable fund. Many of the projects that delivered the best value in terms of the funds' objectives, spanned 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 2016/17 Annual Report).

As a result, this makes the build-up of levy-funded programmes expenditure in any single year, for the large energy user engagement 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 **low carbon 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.

d. For **NABERSNZ**, the levy percentages are calculated by reference to the estimate of work and costs that will be expended in the year relating to the relevant energy benefit sought.

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 2018/19 draft work programme and forecasted budget

										(as per 17/18 Forecast) Commitments brought forward			Commitments carried forward			Total Cost with movement in Commitments included			Levy funding allocated Pro-Rata (except for PEFM levy)		
	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																					
Thermal Performance post 30/06/18	2,044,098							*100%*	2,044,098												
Energywise	2,400,787							*100%*	2,400,787												
	4,444,885		**0**		**0**		**0**		**4,444,885**							**0**	**0**	**0**	**0**	**0**	**0**
Household Energy Use																					
Energywise	1,028,909							*100%*	1,028,909												
Standards and Regulations (including E3)	2,317,597	*95%*	2,201,717	*0%*				*5%*	115,880							2,201,717			1,552,723		
	3,346,506		**2,201,717**		**0**		**0**		**1,144,789**							**2,201,717**	**0**	**0**	**1,552,723**	**0**	**0**
Electric Vehicles																					
Electric Vehicles - CF	7,508,290					*100%*	7,508,290	*0%*				(2,670,834)			2,670,834			7,508,290			7,000,000
Electric Vehicles - IC	1,725,483					*100%*	1,725,483	*0%*										1,725,483			500,000
	9,233,773		**0**		**0**		**9,233,773**		**0**							**0**	**0**	**9,233,773**	**0**	**0**	**7,500,000**
Light Fleet																					
Transport Strategy & Development	298,407							*100%*	298,407												
VFEL	359,355							*100%*	359,355												
	657,762		**0**		**0**		**0**		**657,762**							**0**	**0**	**0**	**0**	**0**	**0**
Lower Carbon Business																					
Govt Leadership in Renewable Heat	130,369							*100%*	130,369												
Standards and Regulations (including E3)	1,545,064	*95%*	1,467,811	*5%*	77,253			*0%*								1,467,811	77,253		1,035,148	54,609	
Engagement and Information: Low Carbon Business	1,317,123							*100%*	1,317,123												
Process Heat Action Plan	860,173							*100%*	860,173												
Large Energy Users	7,593,771	*51%*	3,872,823	*15%*	1,139,066			*34%*	2,581,882	(2,819,735)	(626,608)		1,959,279	979,640		3,012,367	1,492,098		2,124,419	1,054,740	
Technology Demonstrations	795,958	*27%*	214,909	*23%*	183,070			*50%*	397,979	(110,217)	(86,599)		187,672	173,236		292,364	269,707		206,185	190,651	
Industry Development	709,708							*100%*	709,708												
Public Sector/Crown Loans	655,782							*100%*	655,782												
	13,607,948		**5,555,543**		**1,399,389**		**0**		**6,653,016**							**4,772,542**	**1,839,058**	**0**	**3,365,752**	**1,300,000**	**0**
Commercial Buildings																					
Commercial Building Performance	227,132							*100%*	227,132												
NABERSNZ	498,994	*80%*	399,195	*0%*				*20%*	99,799							399,195			281,525		
	726,126		**399,195**		**0**		**0**		**326,931**							**399,195**	**0**	**0**	**281,525**	**0**	**0**
Total to be expensed in 18/19	**32,017,000**		**8,156,455**		**1,399,389**		**9,233,773**		**13,227,383**	**(2,929,952)**	**(713,207)**	**(2,670,834)**	**2,146,951**	**1,152,876**	**2,670,834**	**7,373,454**	**1,839,058**	**9,233,773**	**5,200,000**	**1,300,000**	**7,500,000**
Less Levy expenditure related to commitments made and funded in prior years			2,929,952		713,207		2,670,834														
18/19 Levy activities expensed in year			5,226,503		686,182		6,562,939														
Add: 18/19 Levy activities contractually committed in year but not expensed in year (funding held in retained earnings)			2,146,951		1,152,876		2,670,834														
Total cost of 18/19 Levy related activities			**7,373,454**		**1,839,058**		**9,233,773**														
2018/19 Funding breakdown																					
Levy Appropriations			5,200,000		1,300,000		7,500,000														
EECA Baseline Appropriation			2,173,454		539,058		1,733,773														
			7,373,454		**1,839,058**		**9,233,773**														

Appendix 4: Table on 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 brought forward			Commitments carried forward								
	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	1,167,421	
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	132,579	
Industry Development	710,976							*100%*	710,976												
Public Sector/Crown Loans	613,140							*100%*	613,140												
	13,830,921		**6,339,787**		**679,655**		**0**		**6,811,479**							**4,767,446**	**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**		**8,629,130**		**679,655**		**8,086,543**		**29,429,672**	**(4,502,293)**	**0**	**(2,670,834)**	**2,929,952**	**713,207**	**2,670,834**	**7,056,789**	**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														
17/18 Levy activities expensed in year			4,126,837		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			**7,056,789**		**1,392,862**		**8,086,543**														
2017/18 Funding breakdown																					
Levy Appropriations			5,200,000		1,300,000		6,500,000														
EECA Baseline Appropriation			1,856,789		92,862		1,586,543														
			7,056,789		**1,392,862**		**8,086,543**														

Appendix 5: EECA's 2016/17 Annual Report on electricity efficiency activities

See overleaf.

We are working to make New Zealand a better place to live - economically, environmentally and socially, through the better use of energy.

Energy Efficiency and Conservation Authority
Te Tari Tiaki Pūngao

2016/17 Annual Report: EECA's electricity levy-funded activities

Energy Efficiency and Conservation Authority
Te Tari Tiaki Pūngao

Executive Summary

2016/17 was a period of change and development for EECA. The refreshed New Zealand Energy Efficiency and Conservation Strategy (NZEECS 2017-2022) is now guiding our work programme. In addition, in 2016, we conducted a review of our programmes, the findings of which have given us a clear pathway to ensuring our programmes represent the best value for money and their performance can be monitored and clearly demonstrated.

2016/17 was also the last year in which we received levy funding from the Electricity Industry Levy (electricity levy) alone. With the passing of the Energy Innovation (Electric Vehicles and Other Matters) Act in June 2017, EECA can now receive funding from the Gas Safety, Monitoring, and Energy Efficiency (GSMEE) levy and the Petroleum or Engine Fuel Monitoring (PEFM) levy. These changes will enable us to focus on carbon intensive sectors, such as process heat and transport, as well as continuing to invest in driving efficiencies in the use of electricity.

Since 2006, our electricity levy-funded initiatives have cumulatively reduced New Zealand's annual electricity consumption by 2,519 GWh (9.1 PJ). This year (2016/17) we delivered a total of 319 GWh (1.15 PJ) in new annual electricity savings. We did this by implementing programmes that improve the electricity efficiency of available products, and supporting New Zealand's largest energy using businesses and public sector organisations to become more efficient with their electricity use.

The electricity savings achieved this year also reduced peak demands on generation and transmission lines and systems by approximately 71 MW, which helped avoid the need for investment in new generation capacity, and maintained downward pressure on electricity prices for all consumers.

While the portion of our costs recovered from the electricity levy has reduced in 2017/18, with funding now coming from other levies, I would like to acknowledge its contribution to the overall operation and performance of EECA. I would also like to thank the industry for the constructive manner in which consultation was carried out in late 2015, with submissions from a range of industrial, manufacturing, product suppliers and residential customer groups.

We look forward to your continued interest in our programmes.

Andrew Caseley
Chief Executive

November 2017

Energy Efficiency and Conservation Authority
Te Tari Tiaki Pūngao

1. Introduction

Each year the Crown places a levy on electricity industry participants in order to fund electricity efficiency improvements. Under the Electricity Industry Act 2010, EECA is able to use the electricity levy to fund its work to encourage, promote and support electricity efficiency.

As in previous years, we carried out a joint consultation process with the Electricity Authority in November 2015 to ask stakeholders, and the public, for their views about the use of the levy for our proposed 2016/17 programme of work.

Following consultation, the Minister of Energy and Resources allocated $13 million in electricity levy funding, through the Energy Efficiency and Conservation appropriation, to fund our proposed initiatives.

This report describes our levy-funded activities in 2016/17 and the benefits they delivered.

2. Summary of EECA's 2016/17 levy expenditure and outcomes

EECA designs its programmes to focus on economic and achievable savings across all sectors of the New Zealand economy. This year, our electricity levy-funded initiatives focused on the business and residential sectors. The programmes involved were our business programmes (see page 5) and the Equipment Energy Efficiency (E3) Programme, which covers both consumer and commercial/industrial products (see page 8).

Expenditure on levy-funded activities

A total of $12.1 million in levy funds was spent during the year, which included $2.8 million of contracted commitments from the 2015/16 year. A further $3.7 million of commitments were contracted and have been carried over to 2017/18. The net position is therefore a total levy spend of $13 million. Table 1 provides a breakdown of this expenditure against the programmes delivered during the year.

Outcomes of levy-funded activities

Since 2006, EECA's levy-funded programmes have cumulatively saved around 2,519 GWh (9.1 PJ).

Our levy-funded activities have resulted in the following benefits in 2016/17 to electricity users and generators, at a cost to levy payers of about 0.52 cents/kWh[1]:

- additional annual electricity savings of 319 GWh per annum
- additional reduction in peak demand of 71 MW
- $28 million worth of savings per annum.[2]

[1] Levelised cost of energy savings to EECA over 10 years, discounted at 6%.

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

Table 1: Summary of 2016/17 Electricity industry levy-use and delivered benefits

		Consulted proposal		Levy funding allocation		Levy expenditure		Savings			
Delivery area		Proposed 2016/17 funding allocation	Proposed electricity savings	funding committed at 1 July 2016	2016/17 funding allocation	Work completed in 2016/17	Work committed at 30 June 2017[3]	Actual electricity savings	Peak demand reduction	Dollar savings	Cost to the electricity levy[4]
Business	Business programmes	$6.6 m	60 GWh	$2.8 m	$9.3 m	$8.4 m	$3.7 m	79 GWh	11 MW	$6.9 m	1.45 c/kWh
Business	E3 programme: commercial/industrial products	$1.2 m	80 GWh	-	$1.3 m	$1.3 m	-	107 GWh	27 MW	$9.4 m	0.16 c/kWh
Residential	Consumer information provision[5]	$2.4 m	76 GWh	-	-	-	-	-	-	-	-
Residential	E3 programme: residential products	$2.8 m	124 GWh	-	$2.4 m	$2.4 m	-	133 GWh	33 MW	$11.7 m	0.25 c/kWh
Total		**$13.0 m**	**340 GWh**	**$2.8 m**	**$13.0 m**	**$12.1 m**	**$3.7 m**	**319 GWh**	**71 MW**	**$28.0 m**	**0.52 c/kWh**

[3] 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.

[4] Levelised cost of energy savings over 10 years, discounted at 6%.

[5] As a result of programme re-prioritisation, the proposed information campaign did not proceed and the funding was re-allocated to fund business electricity efficiency initiatives (see page 7). This was the only change to the proposed work plan we consulted on in November 2015.

Programme benefits accrue not only to those who are using electricity more efficiently (via direct cost savings), but to all consumers of electricity. This is because reduced demand maintains downward pressure on wholesale electricity prices and reduces the need to build new generation capacity, while reductions in peak demand also reduce the need for additional network capacity.

While New Zealand's electricity system is highly renewable, with more than 84% of its electricity generation being from renewable sources in 2016, increased electricity efficiency reduces the emissions associated with the remaining fossil fuel generation. Using the average greenhouse gas emission factor for New Zealand's electricity system, our 2016/17 levy-funded programmes have conservatively resulted in 45,055 tonnes CO_2e being avoided per annum. [6]

3. 2016/17 electricity levy-funded programmes

Business and commercial sector

EECA has a range of programmes to increase awareness in businesses and public sector organisations, and reduce the barriers to electricity efficiency improvements. We work directly with the largest energy using businesses in New Zealand; the top 200 – who represent approximately 70% of total business energy use and 60% of energy expenditure – and medium energy-user groups (the next 1,000). We make use of our partnership with industry associations and energy management service providers to reach smaller energy users. The EECA Business website provides information support to all business groups.

Our work with large energy using businesses has delivered electricity savings in 2016/17 of 79 GWh, making an additional $6.9 million available for reinvestment. The co-funding EECA provides is capped at 40% of the total project cost and the business provides the remainder.[7] Much higher levels of funding leverage is often achieved.

Business energy management

We provide tailored energy management advice programmes to encourage businesses to take a strategic and long-term approach to energy management.

In 2016/17, we formed new partnerships with 36 large energy-using businesses, taking the total to 119 partnerships currently being implemented. This means we are now providing tailored advice to businesses that represent 50% of the energy use of all New Zealand businesses and are directly engaging with senior decision-makers and operational staff to lock-in energy management over the long-term.

Businesses with new agreements this year include Norske Skog, NZ Steel, Nelson Cool Stores, Sealord, Kiwirail and Refining New Zealand. Partnerships agreed in the previous year continued to be implemented including with Fonterra, Oji Fibre Solutions, Whakatane Mill, NZ Aluminium Smelter, Heinz Wattie's, and New Zealand Sugar.

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[6] 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.

[7] With the exception of the graduate programme, where 50% of co-funding is provided over 2 years.

An example of an energy management programme EECA promoted in 2016/17 is the Refining NZ programme, which has a target to save at least 10 GWh a year - the equivalent energy use of 1,100 households and 2,300 tonnes of CO_2 per year. For more information on this initiative, refer to: www.eeca.govt.nz/news-and-events/media-releases/reduced-energy-and-co2-emissions-for-refinery/.

EECA also promoted results from a number of partnerships including Kiwifruit packing company EastPack, which is one example of businesses linking electricity efficiency with productivity. Since focusing on energy efficiency, Eastpack has reduced its energy use by 8% and improved energy performance by 26 kWh per tonne of kiwifruit packed. Details can be found at: www.eecabusiness.govt.nz/resources-and-tools/case-studies/eastpacks-energy-efficiency-programme-packs-hefty-punch/.

Meat processors AFFCO also achieved excellent results through a compressed air project, saving 607,000 kWh a year in electricity: www.eecabusiness.govt.nz/resources-and-tools/case-studies/cutting-compressed-air-leaks-saves-affco-a-lot-of-energy/.

Technology demonstration 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 2016/17, six electricity projects were supported. These projects demonstrate the potential of:

- trans-critical refrigeration systems at Alexander Park
- LED security tower lighting at the Ports of Auckland
- LED theatre lights at Capital and Coast District Health Board
- water cooling St George's Hospital
- a co-generation project at Whangarei waste water treatment plant
- a screw expander generation project at South Island MDF processors Dongwha.

Once the projects are complete, EECA will promote wider uptake in relevant sectors, such as health, farming, sectors with large scale-lighting needs. A good example where a technology demonstration project has been replicated is the Vari-cool milk chilling project on one farm site, which has now been adopted by 80 other farms. Further details can be found at: www.eecabusiness.govt.nz/resources-and-tools/case-studies/vari-cool-chilling-sysyem/.

Another successful project we promoted this year is the Northern Arena, Auckland, pool heating technology demonstration. A number of large pool operators have older style heat pump systems and have adopted this technology: www.eeca.govt.nz/news-and-events/media-releases/saving-energy-enhances-pools-brand/.

Commercial sector

EECA supports electricity efficiency improvements in the commercial sector through:

- Providing advice and building industry capability through building management training, the NABERSNZ[8] building rating scheme, and commercial lighting efficiency information.
- Training to improve electricity management and efficiency in the refrigeration, air-conditioning and heating services industry, focusing on systems components and new technologies.
- Providing co-investment for electricity monitoring and targeting projects.
- Providing building performance advice.
- Providing information and advice on cost-effective electricity efficiency improvements to motor systems (compressed air, pumps, fans and industrial refrigeration).

In conjunction with the New Zealand Green Building Council, EECA continued to support NABERSNZ, an energy rating scheme for buildings. Thirty-one NABERSNZ certified ratings were completed in 2016/17 and 202 self-assessments were completed using an online tool as a first step to gaining a certified rating. EECA continued to provide co-investment for monitoring and for target projects and building design advice to prepare buildings for a future NABERSNZ rating. A number of the ratings were promoted, including a 1970s Wellington office block that received a 5 star out of 6 star rating. The media release can be found at: www.nabersnz.govt.nz/news-and-resources/media-releases/a-1970s-office-block-in-wellington-is-now-an-energy-smart-show-stopper/.

Capability building of service providers and industry stakeholders was provided by training around 350 commercial building energy specialists and facilities managers, who will go on to identify, advise on, and implement improvements in commercial buildings. This training was provided in partnership with Waikato University and the Energy Management Association of New Zealand. This training means New Zealand businesses have access to trained and accredited energy management experts, which is important given many businesses do not have this capability.

Summaries of all business case studies are available on the EECA Business website: www.eecabusiness.govt.nz/case-studies/.

Consumer information provision

As the New Zealand authority on electricity efficiency opportunities, we invest in providing reliable, independent information to help New Zealanders understand what they can do to make better use of their energy. In 2016/17, we continued to do this through our ENERGYWISE programme with Crown funding. Consumer survey data indicates this programme leads to changes in consumer behaviour and results in electricity efficiency improvements, although these are difficult to quantify.

We also had a target to deliver electricity savings of 76 GWh through a new electricity levy-funded information campaign that did not proceed and the funding was subsequently re-allocated to business-related energy efficiency initiatives (see Table 1 and refer to section above). This means we did not quantify any electricity savings from consumer information provision in 2016/17. This was the only change to the work plan we consulted on in November 2015.

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[8] NABERSNZ is a system adapted from the National Australian Building Energy Rating System (NABERS) for rating the energy efficiency of office buildings. It is a tool licensed to EECA and is administered by the New Zealand Green Building Council (NZGBC). Ratings are carried out by trained independent assessors

Equipment Energy Efficiency (E3) Programme (business and residential sectors)

The Equipment Energy Efficiency (E3) Programme focuses on reducing the barriers to the uptake of energy efficient products through a regulatory framework by:

- Improving the energy efficiency of appliances through developing and optimising Minimum Energy Performance Standards (MEPS); and
- Helping households and businesses make informed purchase decisions through Mandatory Energy Efficiency Labelling (MEPL) on all regulated appliances for sale in shops.

Over the past 12 months more than 6.2 million appliances and products subject to labelling and regulation were bought by people in New Zealand. They included heat pumps, televisions, computers, whiteware and more than 3.1 million light bulbs. This saved more than 133 GWh of electricity, 18,400 tonnes CO_2e, and for the consumers, it also meant a saving of $11.7 million. These savings are expected to be realised on an annual basis for years to come.

Standards and Regulations

We develop MEPS in collaboration with the Australian Government, states and territories. MEPS are designed to keep poor-performing and inefficient appliances out of the country. There are now 25 products or product groups subject to labelling or minimum standards.

Work progressed in 2016/17 on policy development for new or revised MEPS for five product categories. This year we consulted on changes to standards for lighting, commercial and domestic fridges, freezers and industrial fans. EECA is leading the trans-Tasman project to revise and update the standards for many commercial refrigeration products. Over the past year public consultation on the policy was held and EECA has been working with an industry-based technical working group to clarify a number of the implementation details.

Energy Rating Label 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 how energy efficient one product is compared to another. This year we surveyed 200 stores across the country and found 98% compliance with disclosure requirements.

ENERGY STAR

In 2016/17, 41% of product sales were ENERGY STAR qualified products.

EECA started administering the voluntary ENERGY STAR mark in 2005 as a quick guide to help consumers choose energy efficient appliances. At this time there were regulations on only 12 products and appliances in New Zealand. As the E3 Programme has gained momentum, the ENERGY STAR label has become less relevant. Market research by Ipsos, an independent research company, shows the Energy Rating Label, which compares running costs, gives more in-depth information to consumers and influences purchasing decisions more than the ENERGY STAR mark. We have responded to this research and to meet changing consumer expectations, we are developing an online tool for the public to find the most energy efficient products that are regulated in New Zealand, from December 2017.

As the ENERGY STAR programme is not having a significant influence on purchasing decisions, the return on spend is not high enough to justify continuing to promote the label. As such, we have decided to retire the programme from 2017/18.