MAJOR ELECTRICITY USERS' GROUP

22 October 2013

Mike Underhill
Chief Executive
Energy Efficiency and Conservation Authority

By email to levyconsultation@eeca.govt.nz

Dear Mike

Proposed electricity efficiency appropriation for 2014-15

1. This is a submission by the Major Electricity Users' Group (MEUG) on the Energy Efficiency and Conservation Authority's (EECA) work programme[1] and proposed appropriations for 2014-15.
2. Members of MEUG have been consulted in the preparation of this submission. This submission is not confidential.
3. For the last two years MEUG has opposed the proposed electricity efficiency levy[2]. This year to test if we should modify our prior views we sought more information. Questions and answers (Q&A) between EECA and MEUG are included in the appendix to this submission.
4. The following paragraphs discuss five observations from this analysis. Further information is also requested and is emphasised in text underlined.
5. First, EECA have not undertaken any recent independent evidence of the scale of market failure in the electricity efficiency market. There is a list of claimed[3] "market barriers" but as we have in prior years noted, most of those are commercial barriers to uptake of energy efficiency options rather than economic market failures in the standard policy analysis sense[4]. While a subjective view, MEUG suggests the likely material economic market failure for optimal uptake of energy efficiency is information asymmetry. Given the wealth of pricing information in the electricity market compared to other energy forms; arguably any information asymmetry problems in the electricity efficiency market may be less than that of other energy forms.

[1] Document http://www.ea.govt.nz/dmsdocument/15705 found at EA web site http://www.ea.govt.nz/our-work/consultations/corporate/2014-15-appropriations/ with EA web site referenced from EECA web page http://www.eeca.govt.nz/news/eeca-consulting-on-electricity-levy

[2] MEUG 2012 submission document http://www.meug.co.nz/includes/download.aspx?ID=124931 and 2011 submission document http://www.meug.co.nz/includes/download.aspx?ID=119076 .

[3] Refer Q&A 14

[4] For example refer Treasury's Regulatory Impact Analysis Handbook, July 2013, section 3 is titled "Define the problem and asses its magnitude" and subsection 3.2 includes a list of market failures. Document UL http://www.treasury.govt.nz/publications/guidance/regulatory/impactanalysis/ria-handbk-jul13.pdf

6. Second, EECA's claims of national benefit from levy funded work to date have not been independently validated nor has EECA undertaken any evaluation of the effectiveness of specific programmes that have been supported by levy spending to date[5]. This is critical because it eliminates use of prior claimed programme benefits as justification for the 2014/15 levy funded work programme. MEUG finds it incredible that there has been no ex post assessment of specific projects.

7. Third, at the aggregate programme level EECA have failed to provide any independent ex post evidence that the $98 m of levy payers funds spent between 2006 and 2013 have resulted in 1,169 GWh per annum in 2013 of electricity savings relative to the case had the levy funded work not been in place. Levy payers and Ministers are being asked to believe an ex ante estimate is sufficient evidence. This is not good enough. A quick investigation of the claimed 1,169 GWh per annum savings shows the underlying assumption is an assumed 10 year persistent benefit. We find that hard to believe.

8. Fourth, for those market failures that are non-controversial, such as information asymmetry, EECA has not shown that the work programme to be funded by the proposed $13m levy appropriation is the least cost and most efficient option. In addition the proposal has had errors[6] and inconsistencies that undermine confidence in the proposal. EECA's replies have failed to be timely and in some cases have only been partly helpful leading to a need for further questions. Disturbingly EECA's refusal[7] to provide raw data that might support the proposal because you think MEUG as a lobby group might misconstrue the information is both condescending and contrary to how the Official Information Act is intended to work. EECA cannot dictate terms of releasing information. Please provide the data requested per Q&A 5.1.

9. Fifth, there are serious questions about how levy funds are used for business as usual activities of EECA such as product and appliance labelling, a lack of any transparent allocation for multi-fuel site savings, and how levy monies are allocated when used in conjunction with other fuel saving projects. We repeat our request[8] for the methodology for deciding to allocate $100,000 of levy payer monies to "undertake research to ensure our potentials modelling suite is maintained …"

10. As a result of the above observations that the scale of market failure has not been proven, claims of national benefit to date have not been validated, EECA has not demonstrated the proposed work programme is least cost, and cost allocation methods are not transparent, MEUG cannot see how Ministers could agree with EECA's proposed $13m work programme to be funded by a levy on electricity users'.

11. We wish to view the submissions of other parties. Please provide copies of all other submissions. This request and the above underlined requests are in terms of the Official Information Act.

Yours sincerely

Ralph Matthes
Executive Director

[5] Refer Q&A 4.2, "None of our reports have specifically considered the effectiveness of our work as a result of levy funds."
[6] Refer Q&A 1.7 and 1.8.
[7] Refer Q&A 5.1
[8] Refer Q&A 6.1

Appendix: MEUG correspondence with EECA on draft appropriations for 2014/15

This memo combines MEUG questions of 11th September, EECA response of 29th September, MEUG additional questions s of 11th October and EECA additional response of 18th October.

Replies from EECA are in boxes that have been shaded. There has been some formatting to restore MEUG question numbering and in some cases text has been re-formatted.

Start text of original questions (numbered 1 etc) and additional questions (1.x etc)

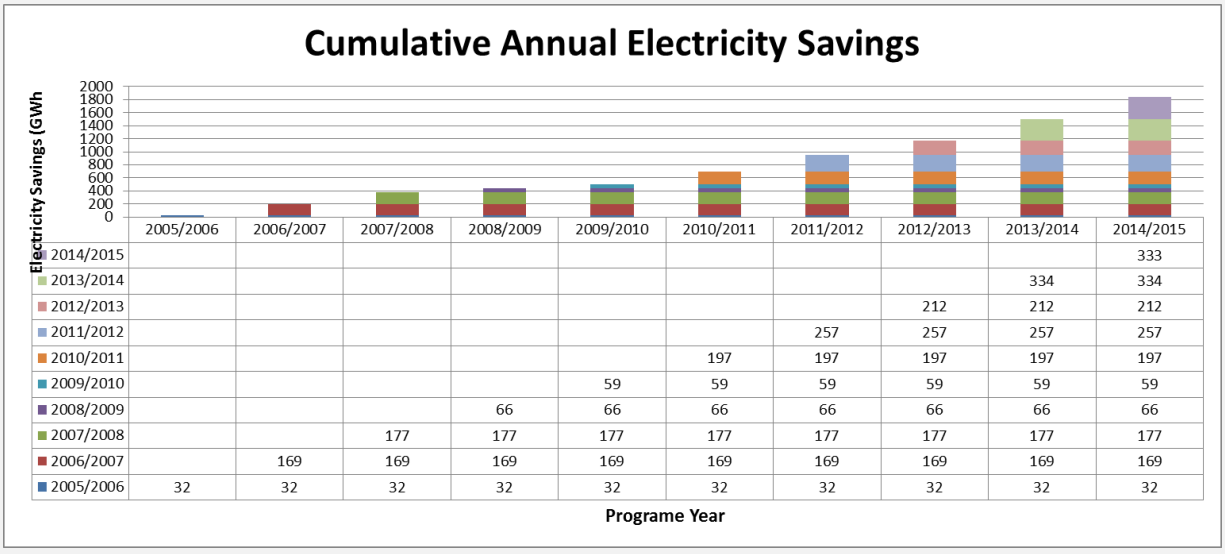
To assist MEUG make a submission by 22-Oct-13 on the just released EECA work programme for 2014/15 levy funded appropriations, please provide the following information and or answers to questions:

1. Please send a web reference for or email me a copy of the model used to calculate annual to date, cumulative to date and forecast for current year and 2014/15 economic efficiency gains/savings ($), volumes (GWh and or PJ), unit values c/kWh and present value calculations discussed in Appendix D, paragraphs D.18, D.32 and Appendix E, p37.

- See attached sheet which is updated from the detail provided two years ago.

1..1. I cannot replicate the calculations in the row titled "Cumulative electricity savings attributable to programme since 2006." Please provide the detailed calculations for the row, or a representative year (eg the easiest should be 2007)to illustrate the methodology.

EECA replied with the table and graph below



	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015
2014/2015										333
2013/2014									334	334
2012/2013								212	212	212
2011/2012							257	257	257	257
2010/2011						197	197	197	197	197
2009/2010					59	59	59	59	59	59
2008/2009				66	66	66	66	66	66	66
2007/2008			177	177	177	177	177	177	177	177
2006/2007		169	169	169	169	169	169	169	169	169
2005/2006	32	32	32	32	32	32	32	32	32	32

1..2. I cannot replicate the calculations in the row titled "Peak supply savings". Please provide a worked example.

Peak load reduction is estimated based on an annual calculation using factors derived from the KEMA study, applied to the reported energy savings reported by the various programmes.

Determination of Peak Demand Reduction

Peak demand reduction has been calculated using data developed by KEMA[9] for the Electricity Commission in 2007. KEMA's detailed study estimated the technical and economic potential energy-efficiency electricity savings and peak demand reduction from nearly 500 technologies in thirty industrial, commercial and residential sub-sectors. Two key pieces of data in the KEMA study were used to derive peak demand (MW) reduction from estimated energy savings (GWh):

- Proportion of energy used by each technology in winter and summer peak and off-peak periods in each industrial, commercial or residential sub-sector.
- Ratio of peak to average load for each combination of technology, time period and sub-sector.

Aggregate peak reduction was determined as the sum of all the winter peak demand reductions for all technologies, coinciding with the maximum New Zealand electricity system load during winter.

The ratio of peak demand reduction to energy saved is greatest for technologies disproportionately used more in the winter months and which experience a high peak to average load during winter. Residential lighting has these characteristics, with maximum usage during short evening periods in the winter peak period. It is compared in the following table with steel manufacturing which is nearly a continuous operation throughout the year and therefore has a much lower ratio of peak demand reduction to energy saved.

Winter Peak Period 2142 Hours	Residential Lighting	Steel Manufacturing All technologies
Proportion of Annual GWh Saved*	35.4%	24.4%
Peak/Average kW (in Winter Peak)*	3.075	1.1459
Peak MW/Annual GWh Saved	0.508	0.130
Implied Load Factor	22%	87%

** KEMA Data*

When determining peak reduction, EECA uses KEMA's data for residential lighting plus composites of commercial applications and industrial motors data over a range of technologies and sub-sectors encountered in the Business electricity efficiency programme:

[9] KEMA: New Zealand Electric Energy-Efficiency Potential Study, 28 September 2007

	Peak MW/GWh	Sub-Sectors	Technologies
Lighting Residential	0.508	1	1
Lighting Commercial	0.135	9	1
Commercial Composite	0.129	9	33
Industrial Motors	0.142	20	4
Average 2012-13*	**0.429**		

** 84 MW peak reduction from 196 GWh savings*

Until the EC electricity efficiency programme was merged into EECA, the average ratio of peak demand reduction to energy saved was estimated to be in the order of 0.44, reflecting the high contribution (about 80%) residential lighting made to total electricity savings arising from the EC efficiency programme. A similar ratio was determined for 2012-13.

This ratio should be reviewed annually to reflect the mix of efficiency programmes undertaken as the ratio will decrease if the the proportion of electricity savings attributable to residential lighting were to decrease.

1..3. I cannot replicate the calculations in the row titled "Estimate of c/kWh savings". Please provide a detailed calculation so I can replicate.

	Year 1	2	3	4	5	6	7	8	9	10	total				
PJ	0.32	0.2944	0.270848	0.24918	0.229246	0.210906	0.194034	0.178511	0.16423	0.151092	2.262446		decayed at 8% per year		
GWh	88.96	81.8432	75.29574	69.27208	63.73032	58.63189	53.94134	49.62603	45.65595	42.00347	628.96				
$ million	2.2														
c/kWh	0.349784														
	0.35 c\kwh														

A worked example of 0.32 PJ per year at a cost of $2.2 million delivering a kWh at $0.35 over a ten year period.

1..4. What discount rate is used and what is the source for the assumed discount rate?

The cost occurs in year 1 and it therefore not discounted.

This methodology was established by the Electricity Commission and is maintained for continuity.

1..5. Please ensure sufficient details are provided to allow validation of the relevant discounted streams in attachment 1, e.g. is the discount rate a real terms rate or if a nominal rate, then what forecast inflation rates have been assumed?

There are no discounted cashflows in attachment 1.

1..6. What evidence was used to assume there would be rolling 10 years of benefits for the initial year and subsequent years levy funded work? I do not understand if over the assumed 10 years of benefits there is steady decay in the fraction of

carried forward benefits. Please provide a detailed calculation so I can replicate the analysis.

As noted above, the model used was established by the Electricity Authority and used in their analysis. EECA maintains the model for the purpose of continuity. In essence the interventions were assumed to have a 10 year life (a conservative estimate based on KEMA using 20 years), and the decay function was recognition that some aspects of the efficiency measure would begin to fail within one year. As an example, even though the life of a CFL is generally considered to be about 6 years, we know that statistically some will fail in their first year of use.

1..7. What value for avoided generation costs are used for the calculations in the table attached?

The avoided cost of new generation is not used in the table attached. See also additional question 8.2 below.

1..8. In attachment 1 for 2013, in the first row "Taxpayers/levy payers money used" the value is $13m. This is different from funds spent in 2012/13 of $12.1m reported on p40 of the consultation paper. Please reconcile the difference.

An error in my part.

1..9. The sum of the "taxpayers/levy payers money used" between 2006 and 2013 in attachment 1 equals $67.2m. Please reconcile that value with the $98m mentioned in paragraph D.18 (p31) of the consultation paper.

An error on my part.

2. Please reconcile estimated cumulative MW peak savings from 2006 to 30-Jun-13 of 531 MW in D.18 and 445 MW in appendix E, p37.

- *The correct figure is 445 MW. The 531 MW figure was based on the expectation of receiving $15.5 million funding for the 2012/13 year, and had not been updated.*

2..1. The difference between $13m and $15.5m of $2.5m is 16% higher than the final voted $13m. Similarly the estimated cumulative peak savings change by 16% (86MW) from 445 MW (outcome based on actual vote) and 531 MW (outcome had requested vote been approved). Therefore the unit value of the programme actually undertaken was identical to the unit value of the work that was not approved. Is this correct?

This is the figure we calculated for the year's electricity savings. We would have thought the $2.5m worth of programmes that were declined in 2012/13 would have had lower unit value. We delivered a greater actual saving than we forecast. It is entirely co-incidental that the figure is the same as the forecast based on a higher spend.

3. Paragraph D.3 in appendix D refers to $17.5m appropriation in 2007. Our understanding is that that is of historical interest only and has no relevance to the appropriation levels voted in 2012/13, 2013/14 or proposed for 2014/15. Can you confirm or correct that understanding?

- *This understanding is incorrect. The Cabinet decision to allow an appropriation up to $17.5 million means EECA can consult on sums up to this amount and make recommendations to the Minister for appropriations up to this level without reference back to Cabinet. The sum of $17.5 million is set aside as an on-going appropriation in the Estimates produced each year as part of the budget process.*

3..1. Please email a copy of the 2007 Cabinet paper and Cabinet decision minute

The Cabinet paper and Cabinet decision minute are held either by the Ministry of Business, Innovation and Employment (the then Ministry of Economic Development) or possibly the Ministry for the Environment. Would you like us to forward your request to the correct Ministry?

To ensure we have no misunderstanding of the history of appropriations and spend to date, please list those values for each year since 1996. This information may be in the model requested in 1. above.

- *We have previously provided detail on the spend from 2006 onwards. The EA should be approached for detail back to 1996 as EECA does not have this information.*

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4. Please send web link or email documents mentioned in appendix D, paragraph D.17 relating to the "monitoring programme to measure changing awareness and action in the consumer population, and compares its results against marketing industry measures for similar types of campaigns."

- *There is no single document that we can refer to that will answer this question in full. An example of the summary results of our consumer monitor is attached as Attachment 2.*

4..1. Referring to the ENERGY SPOT programme in attachment 2, were any electricity levy resources used for the ENERGY SPOT programme and if so how much? What proportion of the total ENERY SPOT programme was funded by the electricity levy and how was the allocation between levy and non-levy funding decided?

4..2. Please send copies of reports since the start of 2013 that have specifically considered the effectiveness of the work programme based on use of electricity levy funds including any change in awareness of consumers.

None of our reports have specifically considered the effectiveness of our work as a result of levy funds. Our programme results have been assessed as a whole.

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5. A list of market barriers is set out in appendix D paragraph 22. Please provide any research that EECA has undertaken on any of these since this time last year.

- *In the last 12 months, EECA has undertaken business monitor research as part of the Business Information Project which has provided some insight into barriers facing businesses. Pat Murray, our General Manager Marketing and Communications would be pleased to take you through the summarised findings at your convenience.*

5..1. Thank you for the offer to meet. I am interested in hard evidence. To cut down your time and mine, please email me the key three documents that have considered barriers to electricity users' realising electricity efficiency opportunities.

Note I'm only interested in barriers for electricity users' because those are the ones that work paid for by the electricity levy should consider.

We reiterate our offer to meet and discuss the results of the analysis with you at your convenience. We are reluctant to provide the raw detail to a lobby group without the opportunity to ensure that the information contained within is not misconstrued.

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6. Appendix D, paragraph D.23 states "EECA will also undertake research to ensure our potentials modelling suite is maintained with current information, and to address the market conditions we are facing." Please advise

    a. when will this work be completed? *By the end of the 2014/15 year.*

    b. will EECA as part of refreshing this model consult with interested parties? and,

    EECA undertakes this work with the assistance of industry specialists where we lack internal expertise.

    c. is any part of the cost of this update funded by the electricity efficiency levy?

    Yes, a contribution of $100,000 has been allowed for.

    6..1. $100,000 to be paid for by electricity users' by way of a share of the levy on electricity users' seems extraordinarily high when electricity is just one fuel segment. Either the research to ensure the potentials modelling suite is maintained with current information is going to be extremely expensive over 2014/15 and hence the share to be paid out of the levy is justified at $100,000, or the work is not going to be great but the share allocated to electricity users' is disproportionate. Please provide information on expected total cost of research to ensure potentials modelling suite is maintained with current information and the cost allocation formula used to derive share against fuel types.

We hold a contrary view to you. Electricity accounts for approximately 25% of New Zealand's energy use, and a $100,000 contribution towards the updating of the potentials information is not unreasonable in our view. The KEMA potentials model cost a significantly greater sum. After oil, electricity use offers by far the greatest potential for energy savings in New Zealand. We would be interested in your evidence that this is not the case.

    6..2. What redress do electricity users' have should they have concerns about the cost allocation method proposed?

No other process is proposed to debate the internal allocation of EECA funding with lobby groups.

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7. The table in appendix D, paragraph D.25 disaggregates the proposed appropriation for the 2014/15 levy funded work into three programmes. Please provide:

    a. A further breakdown of those three programmes into either the 15 sub-programme descriptions in that table or further refinement as considered by the EECA Board. Note it is very unclear how each or the 15 sub-programme descriptions match the estimated products or sector PJ and c/kWh savings. Any information to assist understand the split would be helpful.

- *The 15 subcategories detailed are intended to be descriptors of the areas where we generally find projects that meet our funding criteria within the wider programmes,*

rather than discreet sub-programmes. Within these wider programme areas our funding allocation is determined on a case by case basis depending on the project cost benefit determined at the time.

b. The appropriation for 2013/14 split into detailed work programmes and categorised as committed funds from 2012/13 and allocated in 2013/14. This is needed to allow us to understand the trend from 2012/13 set out in appendix E (pp 38 to 40) to the proposal for 2014/15.

- *Committed funds from the 2012/13 year for carry forward into the 2013/14 year are detailed on pages 38 to 40*
  - ⇨ *Lighting* *$0.9 million*
  - ⇨ *Commercial* *$2.2 million*
  - ⇨ *Industrial* *$4.3 million*
- *The 2013/14 to 2015/16 Statement of Intent details the breakdown of the 2013/14 levy spend as*
  - ⇨ *Commercial* *$8.2 million*
  - ⇨ *Industrial* *$2.8 million*
  - ⇨ *Residential consumers* *$2.0 million*

8. The Dowse case study in appendix E p41 is interesting but raises four question:
   a. what market failure did levy funded work solve? , eg wouldn't The Dowse have eventually realised these savings anyway?

- *The 'market failure' addressed here is the lack of both understanding & capability (information asymmetries), to reduce waste through a process, such as continuous commissioning – EECA's role aims to reduce such information asymmetries and help mainstream the practices, benefits and realisation of good energy management which are currently not being realised in many commercial buildings. Through the promotion of case studies such as the Dowse, and the NABERZNZ commercial building rating scheme, EECA's long-term plan is to overcome such 'market failures' and create a self-sustaining industry where good energy management practices and processes can help business reduce their energy intensity and maintain market leadership. The Dowse project involved the use of a very cost effective but underutilised approach to getting the best out of heating and cooling systems in commercial buildings called continuous commissioning. This is a technique that is not well understood or regularly utilised amongst commercial building owners and operators. Although not specifically referred to in the case study, the market barriers could be characterised as both information-related and financial – the Dowse did not understand the technique enough to believe the investment proposal stacked up and therefore was not prepared to invest in it itself without some assistance. There has been subsequent interest from other commercial building owners and operators in the techniques used and the savings achieved as a*

result that we anticipate will lead to further understanding of this technique and wider scale uptake in the market.

b. the case study reports The Dowse saved $40,000 per annum, but was that all electricity or was there savings in other fuels?

- *The $40,000 of energy savings did include other fuels.*

8..1. Provide a breakdown of the $40,000 into savings per energy type, appropriate units of energy saved (eg kWh for electricity and GJ for gas) and the total fuel costs and energy units for energy form before and after the programme. The difference should equal the initial savings data requested.

c. what was the cost to levy payers? and

EECA's contribution to the Dowse project was $54,400 – $41,700 from Levy, $12,700 from Non-levy on the basis of the split of estimated energy savings to be achieved from the project. This was 40% of the project cost. The project planned to achieve 3,323 MWh of savings over the next 10 years, at a cost to EECA of 3.6 c/kWh (across all fuel types). This is significantly lower than EECA's threshold criteria of 8.5 c/kWh, as the proxy for cost of new generation. However, post-commissioning studies (as per the case study) showed that actualised energy savings were significantly greater than this estimated figure of 3,323MWh.

8..2. What is the source of the 8.5 c/kWh threshold referred to in the answer above?

An internal threshold carried over from the EA when their programmes were transferred to EECA.

8..3. Why is 8.5 c/kWh used when the latest ASX futures price for 2014 (an an annualised basis) is 7.3 c/kWh? Based on MED EDF/LRMC – "whole of life" generation costs, not just 'spot prices'

8..4. Paragraph D.14 (p30) of the consultation paper says EECA uses 11.04 c/kWh as a proxy for the marginal cost of new generation. Please reconcile that estimate with the answer above that EECA's threshold is 8.5 c/kWh

One is our proxy at the time for the cost of new generation, the other is the threshold we use. Our threshold is more conservative.

8..5. What were or are EECA's next steps after the EECA case study? MEUG is particularly interested in whether EECA considered low cost options to socialise learning from the Dowse case study as opposed to repeating that study in other businesses?

The case study detail came from our pool of case studies on our website – our media portal.

d. what tangible benefits did MEUG members, payers of ≈ 25% of levies, derive from levy funded work that saved The Dowse $40,000 per annum?

- *MEUG members do occupy, and in the case of some such as Fletchers, do own commercial buildings that could benefit from the same type of approach as that taken by the Dowse. MEUG members, as direct purchasing participants, also benefit from the downward price pressure that our aggregate electricity efficiency projects have on the wholesale electricity price.*

9. The last paragraph of appendix E notes EECA expects to exit from promotion of the efficient lighting programme. Can you provide any material EECA has developed for exit strategies from other programmes?

- *We would refer to the motor efficiency programme, which has evolved since it began as a motor bounty scheme into a programme to build capability in the motor rewind industry through to a programme to instigate the use of motor maintenance schedules at industrial sites supported by product standards for new three phase motors.*
- *The NABERSNZ programme is an example of the evolution of the commercial building programme from a financial assistance programme to more of an information based programme. The voluntary NARERSNZ ratings will provide information to tenants on their energy use and to owners on the energy efficiency of their building. In time the programme will drive tenants towards more efficient buildings, and will drive building owners to improve the ratings of their buildings.*

10. Following on from question 9 above, what forecasts for work programmes that would be meet by levy payers has the EECA Board considered for 2015/16 onwards?

- *The EECA Board is currently considering our longer term strategic view, which would include the future use of levy funds. No specific forecasts have been considered as yet.*

11. The draft appropriations paper is on the EECA web site but I can't find a reference on the EECA web site. I would have thought EECA would have a flag for this very important consultation on their home page also but it isn't mentioned. Please refer me to relevant the EECA web page where interested parties are given notice of this consultation.

We feel the levy consultation has been placed in a prominent position in our banner in the EECA website.

12. Paragraph D.14 (p30) of the consultation paper says EECA uses 11.04 c/kWh as a proxy for the marginal cost of new generation.

That is correct.

13. Referring to the Efficient Lighting programme for 2012/13 on p38 of the consultation paper:

Based on "actual" monthly sales data & annual sales analysis

- Should the right hand side column table header be titled 2012/13 rather than 2011/12? Yes it should.
- Provide independent expert evidence of the claimed 100 GWh energy savings in 2012/13. If there is no independent evidence, then provide EECA's estimate. EECA's estimate is 100GWh.
- Has EECA any evidence of the fraction of efficient bulb demand growth of 15% year on year to end of May 2013 that can be directly attributable to the $4.2m spent by EECA in 2012/13?

  EECA has undertaken market research and in house validations from which we have estimated the counterfactual in terms of efficient light bulb sales.
- Provide a breakdown of the $4.2m spent in 2012/13 into:

  13..1. Information and capability: Training

  13..2. Information and capability: RightLight marketing campiagn

  13..3. Financial incentives to overcome cost barriers. Note MEUG has serious concerns that EECA should be spending levy payers money to address perceived commercial issues rather than market failures.

We have noted MEUG's persistent concerns regarding commercial decisions and market failures. We would reiterate our focus on market barriers – which includes market failures as a subset. The market barriers we list are included below for clarification.

Programmes will be targeted to cost-effectively address **market barriers**, including:
(a) access to information, leading to process efficiencies and behavioural changes;
(b) split incentives and intra-organisational blockages;
(c) technical expertise within and/or available to businesses; and
(d) budget constraints and investment capital prioritisation.

Our market research suggests that not all businesses have actions in place to manage their energy use – a finding backed up by the recent Stats NZ release which noted 25% of businesses overall had no plans in place to monitor energy usage, and 20% of manufacturing industry businesses had no monitoring in place.
EECA would be interested in evidence that MEUG can supply showing energy savings initiatives undertaken by each of their members, split by those initiatives supported by EECA and those undertaken independently.

14. Referring to the Commercial Buildings programme for 2012/13 on p39 of the consultation paper:

- Provide independent expert evidence of the claimed 60 GWh energy savings in 2012/13. If there is no independent evidence, then provide EECA's estimate. This should be as detailed as possible including time of day and year any claimed savings arise in order that we can understand the linkage with any claimed benefit from avoided peak supply savings.

  EECA's estimate is 60 GWh based on reported savings from individual projects.

- Provide a breakdown of the $6.8m spent in 2012/13 into:

  14..1. Information and capability

  14..2. Financial incentives to overcome cost barriers Note MEUG has serious concerns that EECA should be spending levy payers money to address perceived commercial issues rather than market failures. Please see the note above in relation to market barriers.

15. Referring to the Industrial programme for 2012/13 on p40 of the consultation paper:

- Provide independent expert evidence of the claimed 520 GWh energy savings in 2012/13. If there is no independent evidence, then provide EECA's estimate.

  EECA's estimate is 520 GWh based on reported savings from individual projects.

- Referring to the $183m combined annual energy spend of the industrial sites energy audits were undertaken at:

  15..1. How many separate companies were there?

  15..2. What was the average energy spend per company, and the highest and lowest? We have asked for the information in this form to gain an understanding of the sample size and to avoid possible release of individual company information.

  15..3. Please split the aggregate energy spend into separate fuel types by energy used (say normalise all values to PJ's using energy inputs into the businesses before intra-businesses energy or transformation losses) and value of energy input so we can identify how much was electricity compared to other energy forms.

  15..4. What faction and actual dollar amounts of energy audit costs were paid from the levy?

- Provide a breakdown of the $1.1m spent in 2012/13 into:

  15..1. Information and capability

15..2. Financial incentives to overcome cost barriers. Note MEUG has serious concerns that EECA should be spending levy payers money to address perceived commercial issues rather than market failures.

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16. On p43 of the consultation paper are descriptions of EECA support for:

- "conversion to lumens";
- work with key partners for "improved product messaging and the use of the ENEGY STAR quality mark"; and
- "to improve the presentation of efficient lighting in-store, and increasing percentage of shelving dedicated to efficient lighting".

16..1. Please provide more information on the actual share of levy payer monies spent in 2012/13 on each of these activities and any independent assessment of the value to levy payers' for each item. If there is no independent assessment then provide EECA's estimate.

EECA has not attributed individual energy savings values to the separate points above as the process of doing so would cost more than the additional value the information would provide.

16..2. Please explain if any of these activities in 2012/13 are part of the proposed 2014/15 draft appropriations work programme and what is the specific estimate of value to levy payers' for each activity.

I'm not sure I understand your question. Our programme in 2014/15 will include the same elements, but we expect the incremental uptake of efficient bulbs will increase.

Attachment 1. Detail provided to MEUG two years ago with updated figures in red.

Programme benefits to date.									
June year end	Units	2006	2007	2008	2009	2010	2011	2012	2013
		Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual
Taxpayers/levy payers money used	$m pa	1.4	4.9	5.9	8.0	10.3	11.0	12.7	13.0
Electricity savings	GWh pa	32	169	177	66	59	197	257	212
Note – these are the year's contributions to the cumulative annual savings below. We assume that, on average, measures last 10 years. Yes - 638 GWh for year ended 30 June 2011 is a cumulative figure – see below. Note that 2007 and 2008 programmes focused almost exclusively on the high value CFL subsidy campaign, which has been easily our most cost effective programme to date.									
Cumulative electricity savings attributable to programme since 2006	GWh pa	32	201	378	444	503	700	957	1240
Peak supply savings	MW	18	116	189	207	217	274	315	445
Until the Electricity Commission electricity efficiency programme was merged into EECA, the average ratio of peak demand reduction to energy saved was estimated to be in the order of 0.44, reflecting the high contribution (about 80%) residential lighting made to total electricity savings arising from the EC efficiency programme. A similar ratio was determined for 2012-13. This ratio will be reviewed annually to reflect the mix of efficiency programmes undertaken.									
Estimate of c/kWh savings	c/kWh	1.3	0.7	0.7	0.9	1.2	1.2	0.7	0.9
Note –1.2c/kWh is a cumulative figure calculated by taking the levy spend to June 2011 and dividing by the 10 year lifetime saving created by that levy spend (discounted at 8%).									

Attachment 2: Measured awareness and action.

Over 2 million adults have seen the ENERGY SPOT™ (TES) and 43% have taken action

- 69% total likeability Oct 2011
- 5% dislike
- Social media comparisons (Intl) – 72%, NZ 52%