

Eric Crampton

eric.crampton@nzinitiative.org.nz

11 August 2022

Dear Eric

Re: Official Information Act request – Advice provided by Simon Coates/Concept Consulting on GIDI

On 14 July you submitted an OIA request for information held by the Energy Efficiency and Conservation Authority (EECA). Please see below EECA's response to your request.

You have requested:

“Copies of any reports, advice, or presentations provided by Simon Coates/Concept Consulting relating to GIDI (in any of its iterations) since 1 January 2022 that is not already captured by that OIA request.

For the avoidance of doubt this should include the work referred to in the answer to WPQ 21350”

In response to this request, we have compiled relevant email advice, and related documentation received by Simon Coates/Concept Consulting. We have interpreted this request as relating to substantive advice received, and final versions of documents (eg. financial assessment template) and presentations.

We have provided:

- Substantial email advice received and collated
- Slide presentation 1 on GIDI
- Slide presentation 2 on the Financial Assessment Template
- The final Financial Assessment Template.

It should also be noted that:

- The consultant was not engaged to evaluate previous GIDI projects. They were engaged to provide recommendations about how EECA could best request and assess financial information for any future GIDI funding.
- Data provided to the consultant was limited to the purpose of improving the future GIDI application and assessment process, and analysis of this data about payback and IRR is incomplete on its own.

- Therefore, the advice and opinions related to the additionality of previous GIDI projects based on the consultant's analysis of payback and IRR is incomplete and inaccurate as presented, as these are only one aspect of any additionality assessment
- However, the analysis completed and discussion that resulted has allowed us to better determine the information required from future applicants to the GIDI fund to better assess the appropriate level of public good funding that may be finally approved for any applicant. This was the intended purpose of the work with Concept Consulting.

Some of the information in the advice has been withheld under the Official Information Act, under section 9(2)(ba)(i), as the release of the confidential information would likely prejudice the supply of similar information. This includes information in the slide presentations as well as withholding entirely one spreadsheet attachment referred to in the emails.

You have the right, by way of complaint to the Ombudsman, to seek an investigation and review of the Energy Efficiency and Conservation Authority's response to your information request. You can do this by email to info@ombudsman.parliament.nz or by writing to the Office of the Ombudsman, PO Box 10152, Wellington 6143.

Yours sincerely



Andrew Caseley
Chief Executive

Email advice 1:

From: Simon Coates <simonc@concept.co.nz>

Sent: Thursday, 7 April 2022 10:32

To: Janine Kerr <Janine.Kerr@eeca.govt.nz>

Subject: EECA - the "sweet spot" for the payment or IRR - know yet?

Hi Janine,

If you are going to go for a 'sweet spot' approach, IRR is much better than payback.

However, the difficulty is in determining what the correct threshold value should be. It is usual for companies to apply a higher effective IRR threshold for projects which are relatively risky or small to those which are less risky or large. It would be difficult to come up with hard-and-fast rules in ways which don't exclude genuinely additional projects.

Further, it is possible that projects with IRRs of greater than a notional threshold value may not proceed due to resource constraints (eg, not enough engineers to do all the projects a company can undertake) or financing constraints (too heavily indebted capital structure). In these cases, a GIDI grant could make such projects (which would be among the most valuable, from an NZ Inc perspective) be genuinely additional.

That is why I suggested the following approaches to help ensure additionality

- Get companies to specify their threshold investment criteria, and measure the project's performance against that - and require them to substantiate why a project whose financial performance is superior to the threshold may not go ahead (eg, due to resourcing or financing constraints).
- Get directors or the CEO to sign-off to state that the information that is provided is correct - with the additional potential for a few random projects to be selected for a post-implementation review
- Favourable government debt financing, rather than grants, for projects whose financial performance is greater than the threshold. (Although, this debt financing approach could inherently be lower-cost for all projects).

I have amended slide 9 in the attached to better spell this out.

If you are going to go for a sweet spot approach, I would suggest that you don't automatically exclude projects, but require them to substantiate why their project would genuinely be additional despite having a high IRR. I would also suggest that you do more research on companies' typical investment criteria to guide determination of an appropriate threshold.

At the other end, I should have stated in my slides that funding should not be given for projects whose abatement cost (calculated from an NZ Inc perspective using the correct method) is higher than the project lifetime-discounted shadow price of carbon. I have also amended slide 7 in the attached to set this out.

Cheers, Simon
Director, Concept Consulting

See my [availability](#) online

From: Janine Kerr <Janine.Kerr@eeca.govt.nz>
Sent: Thursday, 7 April 2022 10:32
To: Simon Coates <simonc@concept.co.nz>
Subject: EECA - the "sweet spot" for the payment or IRR - know yet?

Hi Simon

Just quickly, did you determine a "sweet spot" (range) for the payback period, or the IRR yet - and are you leaning towards the IRR as a better approach?
Our Strategy team are keen to land our criteria and would appreciate your thoughts on this asap if you have already figured this out.

Ngā mihi,

Janine Kerr

Investment Management Product Lead
Investment & Engagement



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From: Simon Coates <simonc@concept.co.nz>
Sent: Wednesday, 6 April 2022 10:41 am
To: Janine Kerr <Janine.Kerr@eeca.govt.nz>
Subject: Re: EECA workshop follow-up - extra hours for CSO - slide pack

Hi Janine,

Please find attached:

- My slides I put together
- The associated evaluation spreadsheet.

I think that completes my deliverables for the initial engagement.

I will amend parts C and D of the CSO to cover

- the costs of producing a revised application spreadsheet and
- helping EECA staff with developing an evaluation spreadsheet and training them on it.

Cheers, Simon
Director, Concept Consulting

See my [availability](#) online

Email advice 2:

From: Simon Coates <simonc@concept.co.nz>

Sent: Thursday, 9 May 2022 16:24

To: Andrew Caseley <Andrew.Caseley@eeca.govt.nz>; Nicki Sutherland <Nicki.Sutherland@eeca.govt.nz>; Janine Kerr <Janine.Kerr@eeca.govt.nz>; Waning Chua <Waning.Chua@eeca.govt.nz>; Michael Henry <Michael.Henry@eeca.govt.nz>; Kanchana Marasinghe <Kanchana.Marasinghe@eeca.govt.nz>

Subject: Additionality

Hi All

Following Tuesday's meeting, I thought it may be worth summarising my views on additionality.

Guarding against giving excessive money over and above what is necessary to make a project 'additional' is inherently hard.

Trying to use an approach which measures a project's financial performance, and excludes those that have financial performance better than a threshold, is problematic because:

- Achieving a sufficient financial performance may not be the constraint determining whether a project goes ahead or not. For example:
 - Resource constraints (eg, limited number of engineers) may mean that a company can only do one out of three projects, say, all of which have very healthy rates of return. Giving GIDI funding may be appropriate to ensure that the project which delivers emissions reduction is bumped up the priority list against projects which don't deliver emissions savings.
 - Capital structure constraints may limit the ability of a company to take on more debt - even for projects with healthy rates of return. GIDI funding may reduce the amount of debt required and enable a project to go ahead.
- There are no hard-and-fast rules as to what an 'acceptable' financial performance should be. As this [PWC report](#) shows, there can be very large differences in costs of capital between companies - and hence appropriate hurdle rates of return to go ahead.

Given this inherent difficulty, I believe the most pragmatic approach is as follows:

1. Ask companies what their threshold financial performance to go ahead with a project is, and check that the project's financial performance (both before and after GIDI funding) is not significantly in excess of this. If it is in excess, this needn't be an automatic exclusion from receiving GIDI funding, but should require the applicant to state why other constraints are preventing the project from proceeding unless GIDI funding is received.
 - a. Requiring a senior manager to certify that the information they have provided is correct and not fraudulent (potentially backed up with the risk of a handful of projects being subject to detailed post-implementation review) should help reduce the risk of applicants excessively 'massaging' information.

- b. Similarly, having the application spreadsheet highlight to the applicant that their stated threshold financial performance is 'high', may help reduce the risk of unwarranted applications. The challenge will be in working out what 'high' values may be. (See point 4, below).
2. Have a toolset which allows comparison of all the financial performances of the different schemes on a 'normalised' (ie, like-for-like) basis - particularly expected future carbon prices. This should help identify outliers in terms of financial performance, as well as inconsistencies between applicants for key assumptions such as future fuel and ETS prices.
 - a. Identifying outliers and inconsistencies should enable EECA to ask some applicants to review their assumptions to check they are correct
 - b. Comparing all projects on a like-for-like basis should enable EECA to exclude projects on the grounds of additionality once it is in possession of all the 'facts' of the different projects, rather than committing to particular thresholds at the start of the process. Instead, EECA can state in the RFP in general terms that it will be reviewing all projects to check whether the level of funding requested is reasonable - including in comparison with the levels requested by other parties.
3. Use GIDI \$ per tCO2 saved as the principal means of ranking projects for the purposes of rationing scarce GIDI funding. Don't use IRR. Instead, IRR should be used in a pass/fail process for additionality.
4. Use information from the likes of the [PWC report](#) as the *starting point* for this pass/fail evaluation. For example, projects with pre-GIDI normalised IRRs in excess of X% above the sector average WACCs could be deemed to be not additional unless the applicant provides information which justifies why this project is genuinely additional.
 - a. Determining the X% value will inevitably require some element of judgement, and should arguably vary with project size (a lower value for very large projects). Comparing all the IRRs that emerge from the application process should significantly help determination of what this X% value should be.
 - b. As an aside, the sector WACCs from the [PWC report](#) are post-tax, nominal. They will need to be converted to pre-tax, real values for comparison with the cashflows in the GIDI applications. This just requires some algebra to do.

Happy to discuss.

Cheers, Simon



Simon Coates, Director

L5, Woodward House | 1 Woodward Street
PO Box 10 045 | Wellington 6140 | New Zealand
[REDACTED] | simon@concept.co.nz

See my [availability](#) online

Email advice 3:

From: Simon Coates <simonc@concept.co.nz>

Sent: Monday, 30 May 2022 15:00

To: Janine Kerr <Janine.Kerr@eeeca.govt.nz>; Andrew Caseley <Andrew.Caseley@eeeca.govt.nz>

Cc: Nicki Sutherland <Nicki.Sutherland@eeeca.govt.nz>; Waning Chua <Waning.Chua@eeeca.govt.nz>

Subject: RE: GIDI RFP for Concept to review relevant parts - CONFIDENTIAL

Hi All

A few brief further thoughts on additionality:

- I think the declaration companies make with their application should clearly state something along the lines of "this project will not proceed without the requested GIDI funding"; and
- I think this declaration should be made by a director.

This view has been recently reinforced having spoken to a director of an Australian company who sought funding from an Australian scheme. They said that having someone at board level having to make such a declaration was a significant check on the company over-egging their proposal. They also said that directors care more about personal reputation, whereas management face stronger incentives around company financial performance so, although getting directors signing a declaration creates more overhead for companies than getting a manager, it could materially reduce the likelihood of receiving applications which aren't genuinely additional.

I also think that when applications come in, EECA will have a lot more data and be better able to identify situations where two similar types of projects (e.g. a coal-->biomass boiler) are requiring very different effective levels of financial support. This should help with assessing the reasonableness of requests.

In this respect, I think there would be merit in analysing all the previous GIDI round applications through a common evaluation framework using the tool I developed to analyse the five earlier projects (or something similar). It shouldn't take too much effort, but could reveal some useful information to help consideration of additionality for future applications.

Right, I'll shut up now. Happy to discuss.

Cheers, Simon

Director, Concept Consulting



See my [availability](#) online

Email advice 4:

From: Simon Coates <simonc@concept.co.nz>

Sent: Monday, 30 May 2022 10:47

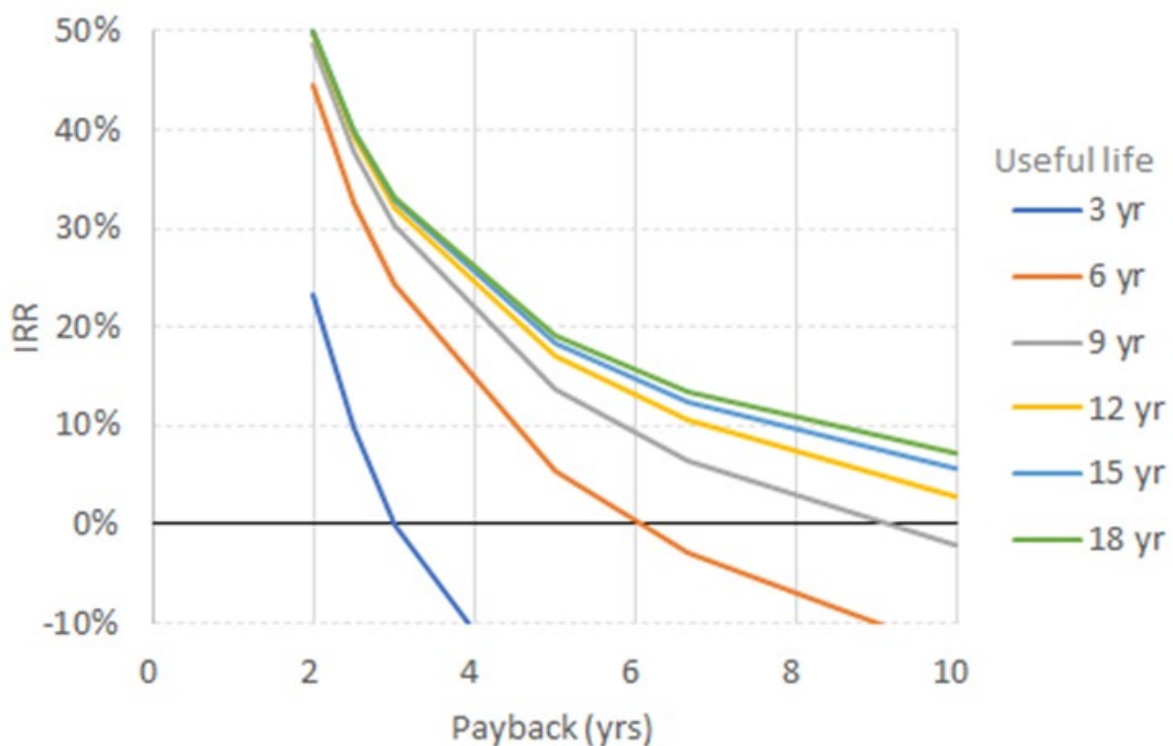
To: Janine Kerr <Janine.Kerr@eeca.govt.nz>; Andrew Caseley <Andrew.Caseley@eeca.govt.nz>

Cc: Nicki Sutherland <Nicki.Sutherland@eeca.govt.nz>; Waning Chua <Waning.Chua@eeca.govt.nz>

Subject: Re: GIDI RFP for Concept to review relevant parts - CONFIDENTIAL

Hi Janine

Sounds good. Just on the IRR / payback issue, this graph illustrates how a given payback can have very different IRRs depending on the useful life of the project (which is the period over which the IRR is calculated).



Cheers, Simon

Director, Concept Consulting


See my [availability](#) online

From: Simon Coates <simonc@concept.co.nz>

Sent: Friday, 27 May 2022 11:25 am

To: Andrew Caseley <Andrew.Caseley@eeca.govt.nz>

Cc: Janine Kerr <Janine.Kerr@eeca.govt.nz>; Nicki Sutherland <Nicki.Sutherland@eeca.govt.nz>;
Waning Chua <Waning.Chua@eeca.govt.nz>

Subject: Fw: GIDI RFP for Concept to review relevant parts - CONFIDENTIAL

Hi Andrew,

I've just spoken with Janine about the draft RFP, and she suggested I email you about the concerns I have regarding what is currently proposed for the scoring approach, and acceptable abatement costs.

With regards to abatement costs, in the eligibility conditions, number 11 states that projects should have a total abatement cost that is ideally above the current ETS price (stated to be \$70/tCO₂) and below the shadow price of carbon. While I agree with the latter, I am concerned that EECA will be boxing itself in by not accepting projects with abatement costs below \$70. I would be surprised if many have abatement costs above \$70, and fully expect a large number (most?) to have *negative* abatement costs. This is because the pre-tax, real 6% discount rate used to value public sector resource allocation decisions is below the equivalent cost of capital for private companies. Thus, a project with an (ex-carbon, pre-tax, real) IRR of 8% would not be profitable for a company with a 10% (pre-tax, real) cost of capital (and thus have a positive abatement cost), but would be profitable for NZ Inc (and thus have a negative abatement cost).

I would therefore remove the text stating that you would not accept projects with abatement costs below \$70.

With regards to scoring, I believe the overarching objective of the GIDI fund should be to maximise the tonnes of CO₂ abated per \$ of GIDI funding provided. In this respect, the GIDI\$/tCO₂ metric (which is what I think you are calling the abatement cost to EECA in section 5.6.6?) should ideally be the sole metric used to select projects, with those which deliver the lowest GIDI \$ per tonne of CO₂ abated being the highest ranking. (Note, this is different to the total project abatement cost, which I address later).

However, there are concerns about additionality. i.e. Concerns that companies will lie in their declarations about the extent of need for public funding.

To address this, it is currently proposed to use weightings for additional metrics. I have a number of issues with what is proposed:

- By giving equal weight to three other metrics (co-funding prop'n, payback, and speed of delivery) the GIDI \$/tCO₂ metric is being demoted to a relatively minor consideration. I think this is not appropriate given the purpose of the funding, and it should be given a higher weighting.
- The consequences of a high level of co-funding will be captured in the GIDI\$/tCO₂ metric. Therefore, I don't believe it is strictly necessary to also use co-funding as an evaluation metric to guard against additionality. That said, including co-funding as a metric is not something I feel very strongly about.
- If you are going to use a financial performance metric (and see my 19 May email for my concerns on this), I strongly believe IRR should be used instead of payback. Payback is a poor comparator metric because it is not good at comparing projects with different lifetimes. For example, a given payback (eg, 1.75 years) could be justified on additionality grounds for a project which brings forward an investment by three years, but unjustified for a project with a useful life of 20 years. In contrast,

IRR is a consistent measure of the opportunity cost of resources that is robust against projects with different lifetimes.

- Whether you use IRR or payback to weight projects according to perceptions of likely additionality, they should ideally do so on a like-for-like basis. I'm not sure the current proposed approach does so:
 - Currently, differences in companies' expectations of future carbon prices will result in differences in IRR or payback. Thus, two identical projects could have different IRRs or paybacks, purely because one company has a much lower expectation of future carbon prices than the other. To correct for this, the IRR or payback evaluation for projects should be on a consistent carbon price projection. One option would be to use a zero carbon price (as the model currently does). An alternative (and possibly better?) approach could be to use the ETS price floor, or to use the carbon forward curve (extrapolating forward beyond 5 years, using the same relative position of the year 5 forward price between the ETS cap and floor prices).
 - Using IRR or payback to is to ignore the fact that different companies can have very different costs of capital (as illustrated by [the PWC](#) report I sent in an earlier email). This should be taken into account, ideally through factoring project IRR based on their stated threshold IRRs.
- I don't know why such significant weight is being given to speed of implementation. It should be worth waiting a bit longer for a project which delivers large amounts of carbon savings for little taxpayer dollars. I think the most appropriate approach to address this dynamic would be to factor the GIDI\$/tCO₂ by the 6% public sector discount rate. Thus, a project which is implemented 1 year later than another would have its GIDI\$/tCO₂ increased by 6%, and so on.

Rather than use a financial performance metric (IRR or payback) for weighting, I would place greater weight on ensuring the requested GIDI funding doesn't go above companies' stated hurdle rates of return (as the spreadsheet currently does), and reviewing these stated hurdle IRR rates for reasonableness. For projects requesting very large amounts of public money, I don't think it unreasonable for them to be required to provide an independent assessment of their cost of capital from the likes of PWC.

I realise that this is relatively late in the piece to still be discussing evaluation metrics. Given the inherent difficulty of these issues, I think the best approach would be one which gives EECA greatest flexibility, and least risk of boxing itself in to having to use an evaluation methodology which it subsequently doesn't believe is the most appropriate.

Accordingly, I would state in the RFP that EECA will be ranking projects based on the amount of taxpayer dollars required to deliver savings (potentially factored by speed of implementation), and that it will be using additional evaluation metrics on the stated financial performance of the different projects to assess whether the level of taxpayer funding requested is appropriate, but not be definitive on the assessment criteria to be used.

Happy to discuss.

Cheers, Simon

Director, Concept Consulting



See my [availability](#) online

Evaluation of GIDI 1.0

Discussion with EECA
24 March 2022

- Concept has been engaged to review a sample of applications from the first iteration of the GIDI fund ('GIDI 1.0') with the purpose of making recommendations for improvements for a possible subsequent GIDI fund ('GIDI 2.0')
- The recommendations were to be delivered verbally via a workshop
- These slides were put together to facilitate the workshop

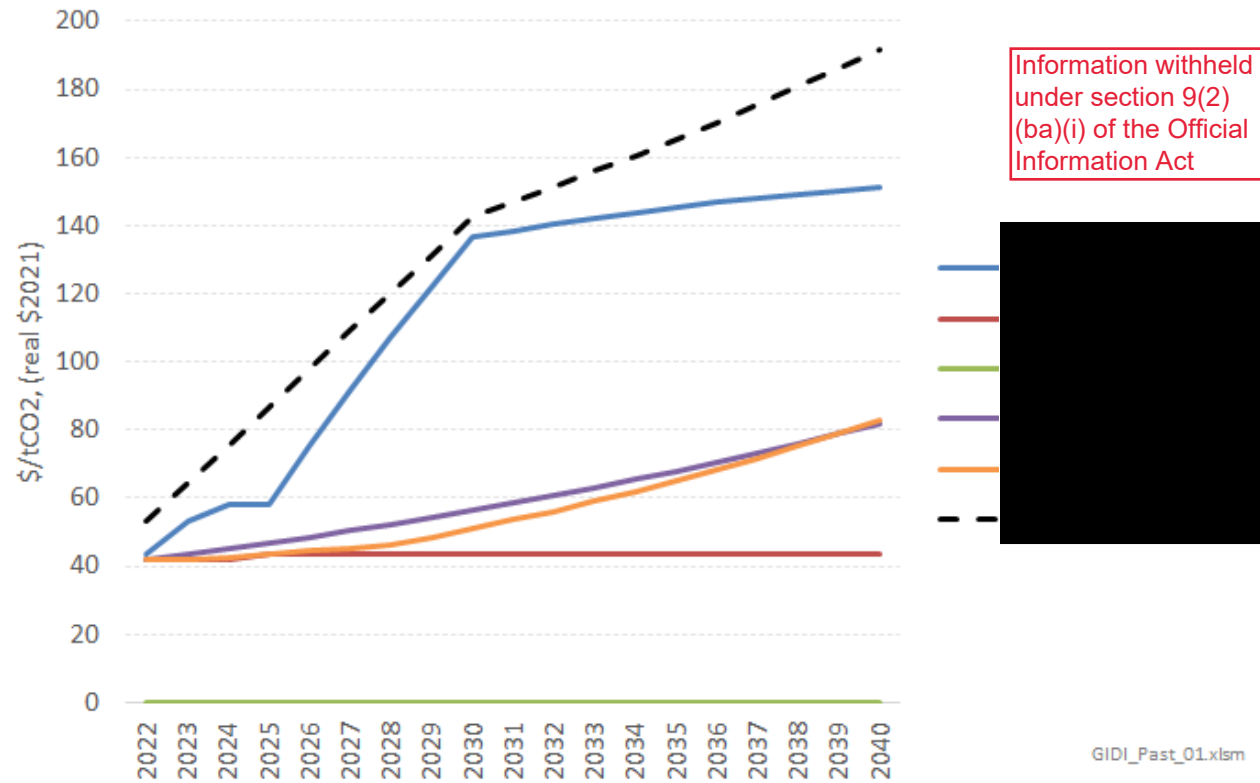
Enabling like-for-like evaluations of projects

Key issue: GIDI 1.0 information not submitted on like-for-like basis

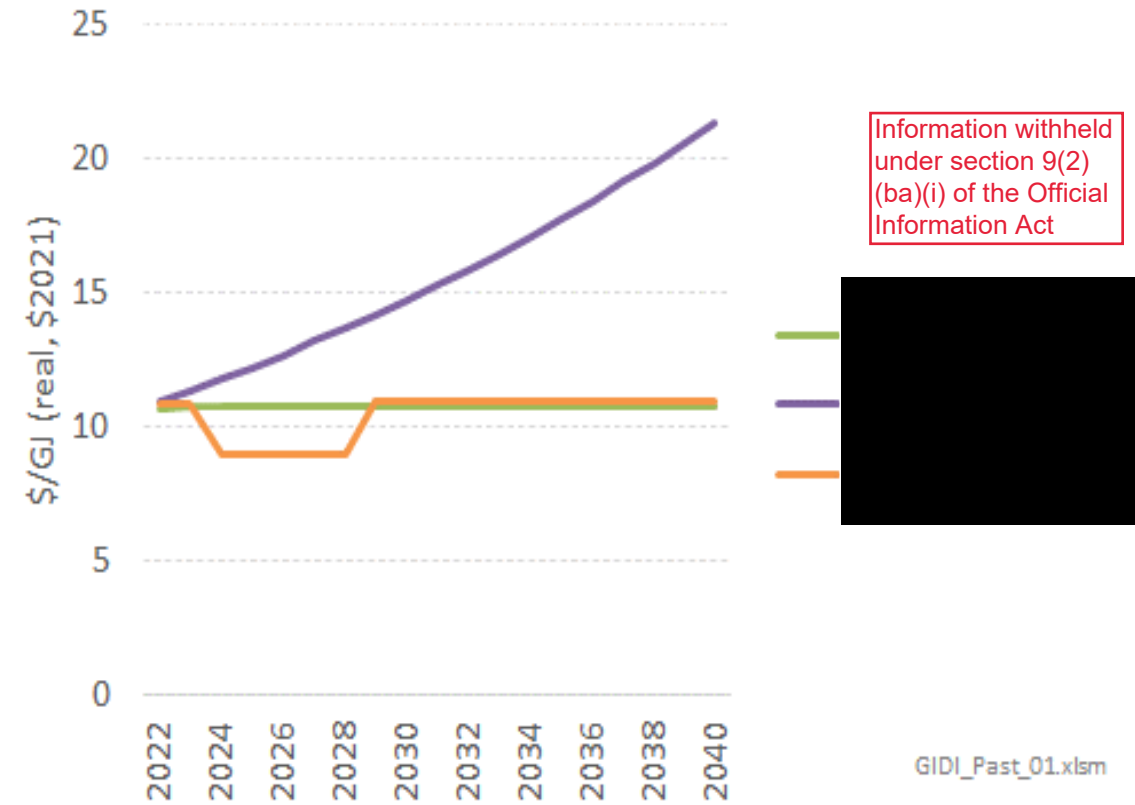
- Different assumptions in three areas meant information provided couldn't be compared 'as is' on a like-for-like basis
 - Inflation. Some were real (ie, no inflation, some assumed 2%, some assumed 3%)
 - Future fuel prices (see next slide)
 - Future ETS prices (see next slide)
- Evaluation spreadsheet developed which brings things on consistent basis, stripping out inflation and allowing each project to have the same assumed future fuel price increases for determining the abatement cost for NZ Inc
- Recommendation for GIDI 2.0
 - Inflation
 - Specify that projections of future costs should be excluding inflation. (And require that the 'Real' year the projections are priced in is explicitly identified (eg, \$2021, \$2022, etc.)
 - Have evaluation spreadsheet which can check for apparent inflation
 - Future fuel prices
 - Have evaluation spreadsheet which can check for consistency of fuel price assumptions
 - Consider whether to make application spreadsheet so that it effectively produces such prices (have part of opex area which is specifically for fuel price components, and subsequent calculation area which combines this with the fuel demand components to produce prices and illustrate implied growth rate)
 - Pros and cons of this approach. May highlight to applicants the illogicality of their assumptions, but introduces extra overhead for model

Significant variance in applicants' expectations of future ETS and gas prices

ETS prices

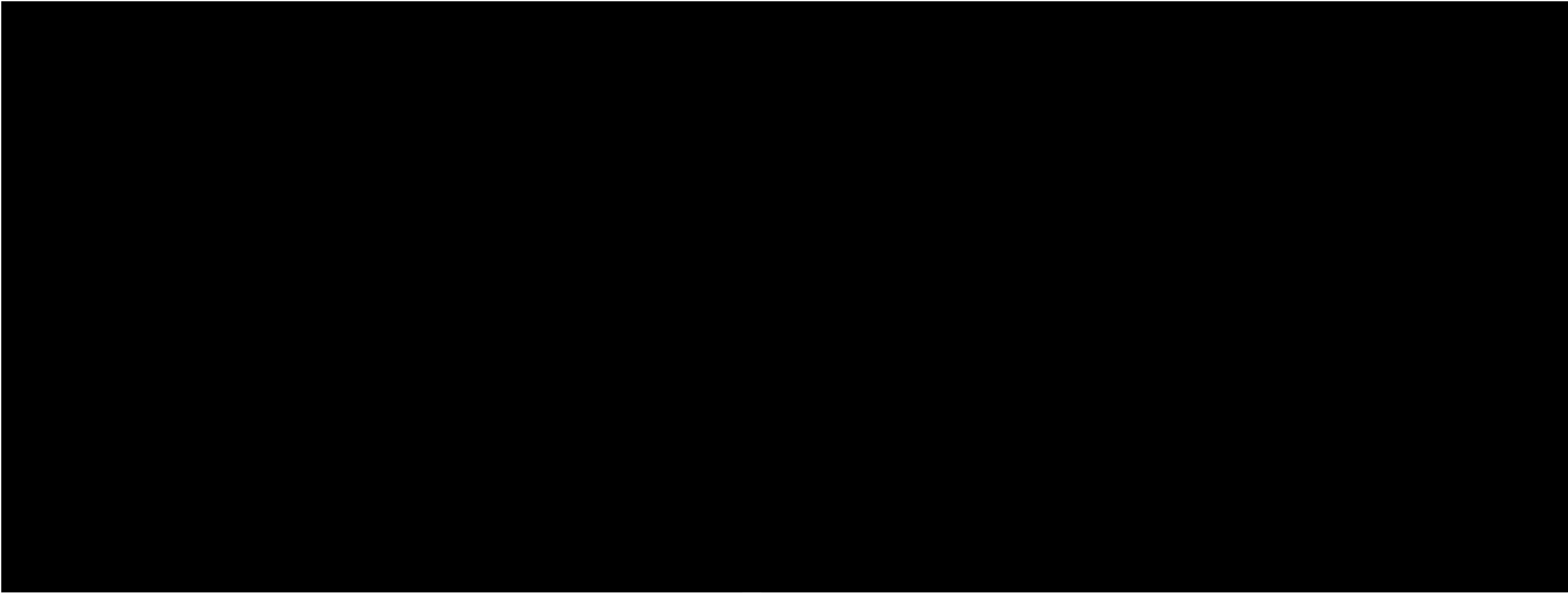


Gas prices



Change in project financial metrics as assumptions progressively standardised

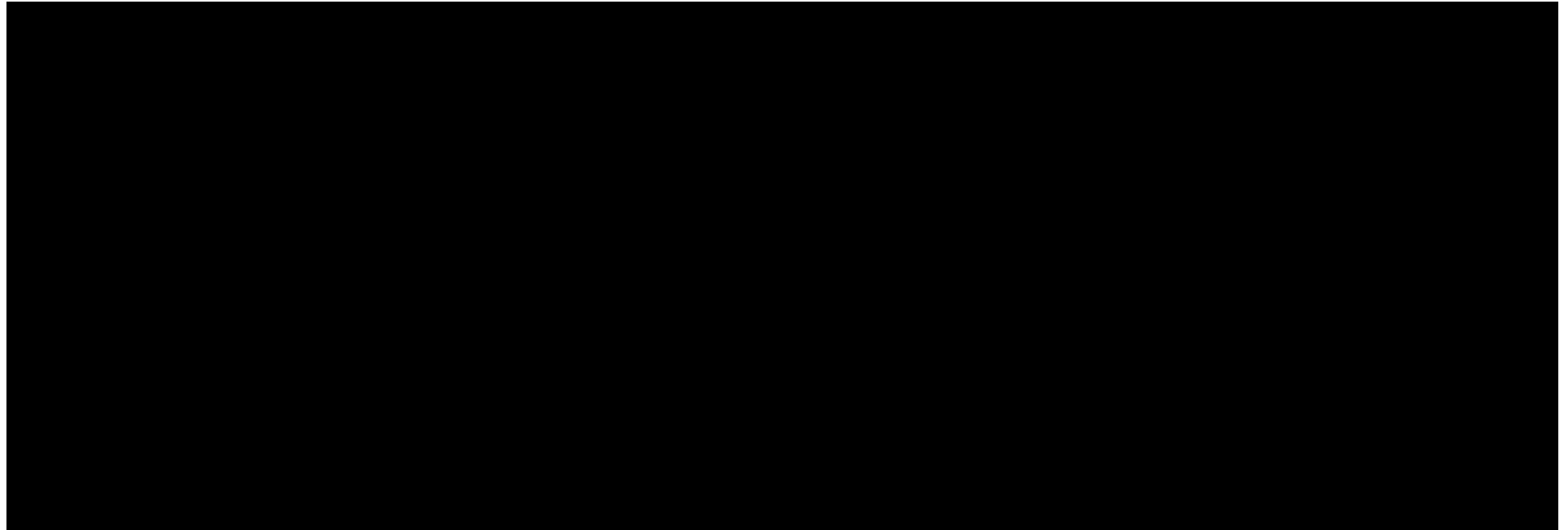
Information withheld
under section 9(2)
(ba)(i) of the Official
Information Act



Calculation of abatement costs

- Simplistic approach taken by applicants is: $\text{GDI capital contribution} \div \text{lifetime carbon savings}$
- Correct approach
 - NPV of the non-carbon net cost/benefit of the project (ignoring GDI contribution) \div NPV of projected carbon savings
 - ie, both projected cashflow and projected carbon savings should be discounted
 - Standardised future fuel prices and public sector discount rate (eg, 6%) used to estimate abatement cost to NZ
- The evaluation tool should use the correct methodology, to enable exclusion of projects whose abatement cost is higher than the lifetime-discounted future shadow carbon price

Information withheld
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(ba)(i) of the Official
Information Act



Additionality

- It appears that four of the five projects evaluated may not be additional
 - Using their assumptions, all have paybacks < 4 years, and 15-year IRRs from 24% to 34%
 - When excluding their assumed carbon costs, three still have paybacks < 4 years, and 15-year IRRs from 19% to 29%
- One option to address this could be to preclude projects whose financial performance is above a threshold (eg, an IRR of [15%] above the official cash rate)
- However, determining the appropriate threshold is problematic. It is usual for companies to apply a higher effective IRR threshold for projects which are riskier or small* to those which are less risky or large. It would be difficult to come up with hard-and-fast rules in ways which don't exclude genuinely additional projects
- Further, in some cases resource constraints (eg, a limited number of engineers) or financing constraints (eg, a capital structure which provides little ability to take on additional debt) may mean that a project with a very high IRR might not go ahead without government support
- The following slides set out a range of possible measures to help ensure projects are additional
 - Requiring applicants to specify their financial performance thresholds for investments
 - Improved sign-offs stating that projects are additional, combined with possible post-implementation checks by EECA
 - Giving GIDI support in the form of loans, not grants, for high IRR projects which are not going ahead because of financing constraints

* The smaller the project, the greater the overhead costs of management time

Checking additionality against applicants own criteria

- One method to test for additionality:
 - Ask applicants for their threshold investment criteria (payback period, hurdle IRR, or discount rate to achieve NPV>0), and the project's lifetime
 - If the project *without* carbon costs performs better than these thresholds, then the project is very unlikely to be additional (barring resource (eg, limited number of engineers) or financing constraints – see later slide)
 - Arguably, this additionality test should be applied to their project including *their* expectations of future ETS costs
- If this testing approach is taken, the application spreadsheet could have such functionality within it, identifying if the project fails this additionality test, and requiring them to substantiate what resource or financing constraints are preventing it from proceeding
 - Would potentially prevent unnecessary claims
 - But could incentivise applicants to 'massage' the data to meet criteria
- Related functionality should be to check the requested GIDI funding doesn't push the project's financial performance for the company significantly beyond their stated thresholds (ie, the company is asking for more than it needs)
 - For example, in GIDI 1.0 some projects appear to have 50% GIDI funding as a target, rather than a limit

- Get directors to sign-off on statement that information provided is accurate and, specifically, that it meets the additionality criteria
- Possibly, could specify that some projects will be selected for post-project implementation lookbacks to check that the performance and project costs were broadly as specified in application
 - Need to determine what penalty would apply if material differences emerge
 - Claw back of excess profits
 - Some other sanction
 - Evaluation would need to be undertaken as to whether the benefit of avoided fraudulent applications outweighs the costs of developing and administering such an approach

GIDI loans for high IRR projects being held back by financing constraints?

- It is possible that some companies may face financing constraints, limiting their ability to invest in profitable projects.
- For example, a company which already has a lot of debt, may not be able to invest in a capital-intensive project which has very attractive financial performance, if the extra debt it would need to take on for a few years would push it beyond financing covenants such as debt service coverage ratios.
 - It is understood that Fonterra is one company whose current capital structure is causing such constraints
- If this is the case, GIDI funding may make projects with very high IRRs additional, even if they would happen anyway in other companies who didn't face such financing constraints.
- Against this background, a possibly superior way of GIDI funding would be for projects whose IRRs are above a threshold would qualify for a GIDI *loan*, rather than a grant.
- GIDI loans could be a lower-cost way for the government to fund industrial decarbonisation projects
- However, the specifics are likely to require specialist financial advice that Concept is not qualified to provide:
 - If an applicant is financially constrained due to covenants on their existing debt, or due to the cost (across their entire debt portfolio) of a rating downgrade, then they probably couldn't accept a standard loan – ie, their broader debt position might be the problem.
 - It's probably possible to advance an equity-like loan that doesn't encounter that problem. (That's essentially what the Crown did with Chorus.) However, the transaction costs get higher because EECA has to work with the applicant to find a form of financing that works for them.
 - It might be there's a universal answer, but EECA would need specialist advice to figure that out

Other issues for the overall approach to GIDI support

An even lower-cost way of funding?

- By definition, participants' expectations of future carbon prices are lower than the level required to make the project cost-effective
- Up-front GIDI capital grants are given to bridge this gap
- However, if outturn carbon prices are higher than expectations, the company will make greater than expected profits
- One alternative financing mechanism is to fund via a carbon price contract-for-differences (CfD)
 - Government pays the difference between the carbon 'strike price' (the carbon price required to make the project cost-effective) and the actual carbon price.
 - If actual carbon prices rise to above the strike price, the government doesn't pay anything.
 - Similar de-risking financing approach to funding of the ultra-fast broadband network
- Would be a significantly lower-cost way of funding projects if participants' expectations are systematically too low (as appears to be the case)
 - Could potentially be incorporated with a GIDI loan approach to further improve government funding leverage?
- However, it would require a change to government appropriations to fund, particularly as it creates some uncertainty for future government liabilities
- Consideration of this issue is beyond the scope of this engagement

- Should you fund projects which simply increase the efficiency of fossil fuel use? (As distinct to those which involve fuel-switching to non-fossil)
 - Potentially evaluate over a shorter time-frame (eg, 10 years) recognising that, as time goes on, there is increased likelihood of the fossil-fuelled appliance being replaced.
- Should additional 'credit' be given to projects which have a demonstration dynamic that is likely to accelerate the broader rate of uptake of a technology?
 - Require publication of project performance (including financial) if such credit is being sought

- Emissions Intensive Trade-Exposed (EITE) companies receive some free allocation of NZUs to prevent them going out of business due to facing competition from overseas companies that don't face as high a cost of carbon as in the NZ ETS.
 - However, this Industrial Allocation process seeks to preserve the incentive on companies to reduce emissions by becoming more emissions-efficient in their production. For example, if a company invests in a technology which halves its emissions per unit of output, it would still receive NZUs based on an assessment of the emissions intensity of production prior to the emissions-reduction investment.
 - A question has been raised as to whether companies which receive industrial allocation of NZUs should also be eligible to receive GIDI funding to undertake investments which reduce their emissions.
 - Having considered this issue, we have concluded that receipt of industrial allocation shouldn't disqualify them from receiving GIDI funding
 - A worked example on the next slide sets out the logic
-
- Note: Concept considers that in many cases the level of industrial allocation is significantly greater than what the company requires to compete with overseas competitors who don't face a full cost of carbon. However, addressing this issue is most properly undertaken via a review of the industrial allocation process.
 - Further, the interaction with GIDI funding set out in the next slide is independent of whether the industrial allocation allowance is overly generous or not

Interaction of GIDI funding and industrial allocation – a worked example

- Consider two companies who use identical coal-fired boilers to raise exactly the same amount of process heat:
 - An 'EITE' company which is trade-exposed and qualifies for industrial allocation
 - A 'Non-EITE' company which isn't trade-exposed.
- Both need to surrender NZUs for emissions from their boilers
 - The EITE company gets them for free from industrial allocation
 - The non-EITE company needs to purchase them
- Both would face the same cost from installing a biomass boiler
- Importantly, both face exactly the same value from the reduced emissions from the biomass boiler:
 - The non-EITE company wouldn't need to purchase NZUs to cover its coal boiler emissions
 - The EITE company would be able to sell an equivalent amount of NZUs due to not having to surrender them to cover its coal boiler emissions
- It is possible that the IRR of the biomass boiler investment is insufficient to pass internal thresholds in both cases, and GIDI funding is sought
- However, if the EITE company lost an equivalent amount of NZUs as the GIDI funding due to concerns of over-rewarding, there would be no improvement in the IRR of the project and it would not go ahead.

The systems and processes for the evaluation of GIDI applications

- Generally, very good
- Several elements enable easier and less error-prone subsequent evaluation by EECA
 - Consistent structure with limited ability to alter
 - Use of drop-down lists & data validation in energy consumption area
- Only focussing on 'above-the-line' (ie, pre- financing and tax) is entirely appropriate given public funding nature of GIDI decision
- Strikes good balance between rigidity (to enable easier subsequent evaluation), and flexibility (to allow applicants to enter information relevant to their specific situation)

Possible areas for improvement for GIDI 2.0 application spreadsheet

- Adding additional column(s) with pull-down / data-validation in Opex area to identify items which relate to fuel costs
 - Introduce error functionality to catch situations where a manual typed entry has been made, but a subsequent opex identifier value hasn't been selected
- Adding named ranges to enable easier pulling-through of data to an evaluation spreadsheet in a structured way
- Require explicit identification of assumed future ETS prices and/or have such prices calculated by the application spreadsheet using additional functionality
- Force requirement to submit ETS-related costs. (Gourmet Paprika did not, just showing gas costs excluding (?) ETS charges)
- Potentially produce more sanity-checking output within the application spreadsheet
 - E.g, reporting financial performance (payback, IRR), implied fuel prices etc
- Suggested additional information to be requested in spreadsheet:
 - Level of GIDI funding requested
 - Project lifetime
 - Investment threshold criteria (payback or IRR) – with associated functionality introduced to test project performance against these thresholds

- Recommend use of an evaluation spreadsheet which can draw in data from all the different application spreadsheets in a consistent fashion, and evaluate them all together at the same time using consistent assumptions
- Concept's GIDI review spreadsheet (provided) is a rough example of this approach
- Functionality of GIDI 2.0 evaluation spreadsheet should
 - Highlight potential inconsistencies w.r.t.
 - Assumptions: inflation, fuel, or ETS price projections
 - Actual financial performance being different to claimed
 - Recommendation – make applicant explicitly state the key financial metrics of project
 - Report on key metrics (financial performance, abatement cost)
 - Include ability to include the subjective evaluation scores (see next slide)
 - Rank the projects and associated spending – to enable funding up to funding cut-off point

GIDI 1.0 evaluation scoring

Criteria	Weight	Thoughts
Value for money carbon abatement	35%	Those which can be demonstrated to be additional (see other slide), should be ranked using appropriate abatement cost calc (see other slide)
Economic stimulus driving domestic employment	20%	If domestic investment vs imported resources is to remain a criteria, require that the estimated % split is included within the application spreadsheet. Ditto FTEs.
Speed of spending	10%	Is this still necessary? Why not make it a simple eligibility requirement that projects need to be started by 'x' and/or finished by 'y'
Ability to deliver	15%	Continue to have as scoring criteria, or simply ask that applicants provide information to demonstrate?
Integrated and optimised approach	10%	Seems hard for EECA to determine without significant effort whether applicants meet this criteria
Level of innovation and co-benefits	10%	If a project has demonstration benefits, this is valuable and should be recognised with a superior score. However, should potentially come with a requirement that information is shared with the wider industry.

About Concept Consulting Group Ltd (www.concept.co.nz)

Concept is one of New Zealand's applied economics consultancies. We have been providing high-quality advice and analysis for more than 20 years across the energy sector, and in environmental and resource economics. We have also translated our skills to assignments in telecommunications and water infrastructure.

Our strength is from combining economic & regulatory expertise with deep sector knowledge and leading quantitative analysis.

Our directors have all held senior executive roles in the energy sector, and our team has a breadth of policy, regulatory, economic analysis, strategy, modelling, forecasting, and reporting expertise. Our clients include large users, suppliers, regulators, and governments – both in New Zealand and the wider Asia-Pacific region.

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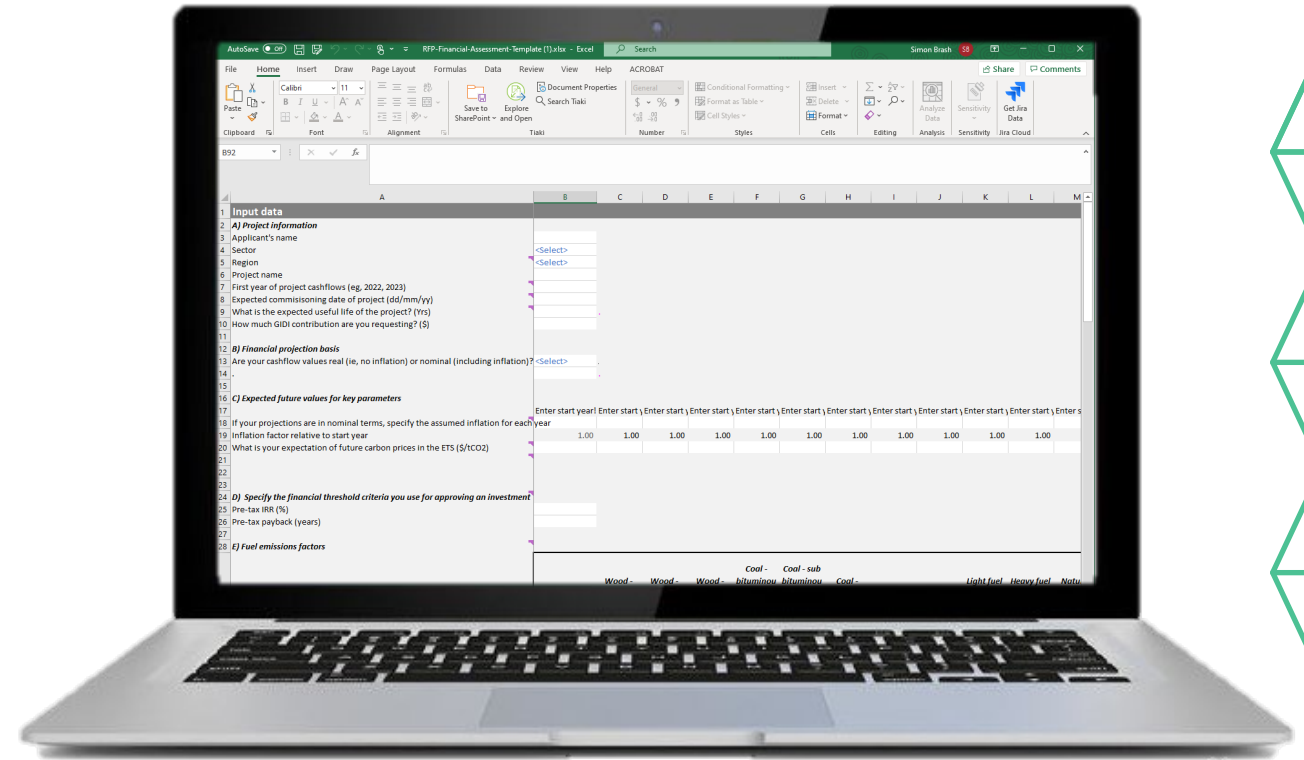
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The Financial Assessment Template (FAT)

- **Fill this out early in the process**
- **Upload to the Response Form**
- **The FAT enables EECA to evaluate all projects on a like-for-like basis**
- **The evaluation:**
 - **compares projected CO₂ abatement cost**
 - **considers likely project additionality**
 - **tests for ‘unusual’ fuel or CO₂ price projections**



FAT structure

In_Out tab:

- Applicants must enter basic information about the project, plus the future carbon prices you use to evaluate projects to reduce fossil use
- Also presents resulting financial performance and CO2 abatement cost

Cashflow tab: Where projections of costs and fuel consumption are entered

- Information about two possible futures required:
 - If the project goes ahead – the ‘Preferred Project’
 - If the project doesn’t go ahead – the ‘Base Case’
- Cost projections can be entered with inflation (‘nominal’) or without inflation (‘real’)
- Only ‘cash costs’ must be entered. I.e, depreciation should not be included in Opex, as captured in Capex
- Fuel-related opex costs split out from other opex to enable EECA comparison of participants’ fuel price projections
 - EECA will seek clarification of ‘unusual’ fuel price projections

Let’s take a quick walk through the FAT

