

Energy from Waste Policy Discussion paper

Consultation report

Prepared by: Office of Resource Recovery, Department of Environment and Science

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Introduction

On 1 July 2019, the Queensland Government released the Waste Management and Resource Recovery Strategy (the waste strategy), which envisions Queensland as a zero-waste society in which waste is avoided, reused and recycled as much as possible. For waste that cannot be avoided, reused or recycled, the waste strategy outlines the development of an energy-from-waste (EfW) policy to guide activities that can recover energy from residual waste materials.

To inform development of the EfW policy, the Queensland Government released the *Energy from Waste Policy Discussion Paper* (discussion paper) for public consultation. Submissions were accepted during the period 8 July to 26 August 2019. At the close of consultation, 81 submissions were received from academics, consultants, the general community, environmental groups, local governments and industry.

During the consultation period, seven consultation workshops on the discussion paper were conducted by Arup on behalf of the Department of Environment and Science (DES). A total of 169 stakeholders attended these workshops across Queensland.

This report outlines the consultation process on the discussion paper and summarises the feedback received.

Overview of the discussion paper

The discussion paper identified the proposed role for energy-from-waste (EfW) in Queensland and how EfW could support implementation of the waste strategy. Specifically, it was recognised that EfW has a role to play during Queensland's transition to a circular economy, by extracting further value (energy) from residual waste materials after exhausting all practical and economically viable opportunities to avoid, reduce, reuse, and recycle those materials.

The discussion paper outlined eight proposed high-level principles to help guide EfW developments in a way that ensures human health and the environment are protected while safeguarding reuse and recycling activities. To elicit public feedback, 14 questions were also posed to help measure public opinion on the issues. The principles and associated questions (with the numbering presented in the discussion paper) are summarised in Table 1.

Table 1: Proposed principles and consultation questions posed in the discussion paper

Proposed Principle	Associated consultation questions)
Principle 1: A risk-based approach will be used to guide and manage the development of EfW infrastructure.	<p>Question 1 (labelled 'Question 2' in the discussion paper): Does the proposed three-pathway framework for EfW technologies provide an appropriate, risk-based approach? What additional or alternative characteristics of EfW proposals should be considered?</p> <p>Question 2 (labelled 'Question 3' in the discussion paper): How should a proposal or technology type transition from Pathway 3 (demonstration) to Pathway 2?</p>
Principle 2: The Queensland Government must consistently apply the waste hierarchy. Regulation and policy must ensure that energy recovery does not undermine recycling, and that disposal does not undermine appropriate energy recovery.	Question 3 (labelled 'Question 1' in the discussion paper): Do you agree that energy should be extracted from residual waste materials rather than disposing of those materials to landfill, if there are no other available alternatives for reusing or recycling the waste materials?
Principle 3: Energy recovery is only appropriate for residual wastes which it is not practically or economically viable to recycle.	<p>Question 4: What role should facility operators, collection contractors and local councils be expected to play in ensuring that only appropriate residual waste is accepted for energy recovery?</p> <p>Question 5: What should the requirements be for safeguarding current and future resource recovery? Does the solution involve segregation, pre-processing or both?</p> <p>Question 6: Should the Queensland Government ban specific materials from landfill, or from both landfill and EfW facilities?</p>
Principle 4: The composition of residual waste will change over time as recycling improves and Queensland transitions to a circular economy. EfW	Nil

facilities must be designed to accommodate this change.	
Principle 5: To be considered genuine energy recovery, thermal EfW facilities must meet a minimum energy efficiency threshold that is consistent with international best practice.	Question 7: Should thermal EfW processes be required to meet the European R1 Criteria? Why/why not?
Principle 6: Queensland should adopt international best practice standards and guidelines for managing the environmental impacts of EfW technologies.	Question 8: Do you agree that the European Best Available Techniques Reference Documents (BREF) for Waste Incineration and BREF for Waste Treatment are appropriate guidance documents for Pathway 2 technologies? Why/why not?
Principle 7: Queensland needs a clear, consistent and well-informed assessment process for new waste technologies.	Question 9: What aspects of the current planning and assessment framework do you think require clarification? Question 10: How can the planning process support effective community engagement? Question 11: What role should the government play in assessing significant EfW proposals?
Principle 8: Proponents of EfW facilities must demonstrate that they have engaged appropriately and transparently with communities impacted by the proposed facilities	Question 12: Do you agree with the proposed stakeholder engagement principles and responsibilities? Is there anything you would add or change? Question 13: How could proponents demonstrate that they have followed the proposed principles of engagement? Question 14: Should proponents of EfW facilities be required to demonstrate that they have obtained a social licence to operate the proposed facility? How would this be demonstrated?

How we consulted

Preliminary discussions were conducted in the lead up to the consultation on the discussion paper. The general community, environmental interest groups, local governments, the waste management and resource recovery industry, and academia were all consulted. These processes are summarised in Table 2.

Table 2: Consultation to develop the discussion paper

Date	Consultation process
June–July 2018	Public consultation on the <i>Transforming Queensland's Recycling and Waste Industry Directions Paper</i> , which included a specific section on energy-from-waste
February–March 2019	Targeted consultation on the key principles for an EfW policy developed in collaboration with an EfW Technical Working Group established under the Recycling and Waste Management Stakeholder Advisory Group
February–April 2019	Public consultation on the <i>Draft Waste Management and Resource Recovery Strategy</i>
July–August 2019	Public consultation on the <i>Energy from Waste Policy Discussion Paper for Consultation</i>
July–August 2019	Targeted stakeholder workshops on the <i>Energy from Waste Policy Discussion Paper for Consultation</i>

Who responded

Table 3 summarises the number of written submissions received from each of the five stakeholder groups, with the responses from academics and consultants combined into a single group to simplify the report. The specific number of responses against each of the principles and questions in the discussion paper is detailed in Table 4. The list of stakeholders who made a submission on the discussion paper is provided in Appendix A.

Table 3: Total number of submissions received

	Academics and consultants	Community	Environmental groups	Industry	Local government	TOTAL
Number of submissions	5	27	6	37	6	81

Table 4: Number of submissions responding to the principles and questions in the discussion paper

Principles and Questions	Academics and consultants	Community	Environmental groups	Industry	Local government
Principle 1	1	1	Nil	4	Nil
○ Questions 1 & 2	3	5	4	10	5
Principle 2	1	1	Nil	6	2
○ Question 3	3	5	3	24	5
Principle 3	1	Nil	1	5	1
• Question 4	3	5	4	25	5
Principle 4	1	1	Nil	6	Nil
• Questions 5 & 6	3	5	4	27	5
Principle 5	1	1	Nil	5	1
• Question 7	3	4	2	26	5
Principle 6	1	2	Nil	5	1
• Question 8	3	4	2	24	5
Principle 7	1	1	Nil	4	2
• Questions 9, 10 & 11	3	5	4	21	5
Principle 8	1	1	Nil	3	2
• Questions 12, 13 & 14	3	5	4	25	5

What was the feedback?

This section presents the general feedback received followed by a discussion of the specific feedback on the principles and the consultation questions. The discussion of the general feedback is arranged by each stakeholder group, while the specific feedback is arranged in order of the eight principles proposed in the discussion paper.

General feedback

Academics and consultants

Respondents in this group were generally supportive of the EfW policy positions. There was support for classifying combustion without energy recovery as waste disposal, and for adopting the BREFs and the R1 criteria as voluntary standards and with modification to account for local Queensland conditions. It was suggested that the State Government, through an expert panel should have a role in assessing significant EfW projects.

Community

Community respondents provided a response to the discussion paper principles and questions, generally in agreement with the position of specific environmental interest groups. Although the EfW paper was not specific to any particular facility, a significant proportion of community respondents made specific mention of opposition to an EfW facility proposed for Ipswich.

A number of respondents strongly opposed EfW, in particular thermal EfW, expressing concerns including the potential for EfW facilities to degrade local air quality and generate odours, and the proximity of proposed facilities to communities. There were particular concerns around the potential for EfW facilities to be co-located adjacent to existing landfilling operations. A few respondents were supportive of EfW as an alternative to landfill but suggested more work was required higher up the waste hierarchy, such as source separation to recover organic materials for recycling. Several responses called for early community input, with transparent sharing of information.

Environmental groups

Environmental interest groups were opposed to EfW, in particular thermal EfW, as a waste management solution, calling instead for greater investment in recycling and improved regulation of existing waste facilities. Key issues identified by this group included:

- the potential health and environmental impacts of thermal EfW
- lack of confidence in the regulator to effectively regulate EfW based on specific experiences with the waste industry in Ipswich
- lack of confidence in the waste management industry to follow the rules
- concerns around the transparency and adequacy of current stakeholder engagement processes.

Stakeholders sought greater involvement of potentially impacted communities in the planning and approvals process, and felt strongly that proponents should be required to demonstrate social licence to operate. The same stakeholders expressed a lack of confidence in the integrity of proponent-led consultation processes.

Industry

Respondents in the industry group included several peak industry bodies and individual waste and resource recovery businesses. Industry stakeholders generally supported EfW and development of the policy. These stakeholders were concerned with:

- ensuring consistent application of regulation across all EfW facilities
- ensuring the policy does not hinder innovation
- proactive state involvement in developing waste industry precincts and EfW facilities
- greater state involvement in assessing significant EfW proposals
- whether DES has the requisite technical competence to fairly assess EfW technologies.

There was mixed support for a social licence requirement in the Policy, with those opposing the requirement suggesting that current processes were sufficient and greater emphasis should be placed on the efforts and engagement taken to obtain social licence.

There was also general support for adopting the BREFs, but mixed views on adopting the R1 criteria. Some opposed the R1 criteria over concerns that it could become a barrier to EfW investment, and unintentionally rule out lower calorific residual wastes used in co-processing facilities as both a source of energy and a replacement for raw materials.

Local government

Submissions were received from the peak local government organisation and five councils, all supportive of EfW and development of the Policy. The main concerns from these stakeholders were around ensuring international best practice criteria (in particular the R1 Criteria) were adapted to the Queensland context and not mandating it; ensuring consistent application of standards to all waste facilities; and providing support to local governments that lack the resources and capabilities to assess EfW proposals, without infringing on their decision-making powers.

Among the local government group, views on the planning and approvals framework diverged with some expressing satisfaction with the existing framework, and others advocating for greater state involvement in coordinating significant projects. There was also support for proponents to demonstrate social licence, with a request for further consultation with councils on assessment and regulatory responsibilities for EfW.

Risk-based EfW framework

Principles and questions

Principle 1	<p>A risk-based approach will be used to guide and manage the development of EfW infrastructure</p> <p>Three risk-based pathways for assessing environmental authority applications for EfW activities were proposed:</p> <ul style="list-style-type: none"> • Pathway 1: Technologies established and operating in Queensland • Pathway 2: Operationally viable and mature technologies • Pathway 3: Development and demonstration of emerging technologies
Question 2	Does the proposed three-pathway framework for EfW technologies provide an appropriate, risk-based approach? What additional or alternative characteristics of EfW proposals should be considered?
Question 3	<p>(<i>Question 2 in the discussion paper</i>)</p> <p>How should a proposal or technology type transition from Pathway 3 (demonstration) to Pathway 2?</p>

Feedback received

	Feedback	Department's response
Principle 1	<p>Most respondents supported the proposed approach.</p> <p>A few respondents disagreed with the framework over concerns with:</p> <ul style="list-style-type: none"> • its ability to manage health and environmental risks • inconsistencies if Pathway 1 and Pathway 2 technologies are regulated differently • the technical competence of the regulator to assess technologies under Pathways 2 and 3 • potential difficulties in proving jurisdictional similarity • proving operational performance when proposal is nuanced compared to the reference facility • the potential burden to small-scale projects in applying the Technical Readiness Levels (TRLs) • the focus on facilitating EfW sector growth before existing facilities have been made fit for purpose. 	<p>The suggestions have been noted.</p> <p>The three pathways have been streamlined into a single pathway that focuses on demonstrating operational performance.</p> <p>Where operational performance cannot be demonstrated (e.g. with emerging technologies that lack historical operational data), alternative data from the research and development stages will be required, and there may be greater/more frequent monitoring and reporting requirements.</p>
Question 1	<p>Several suggestions were made, including to:</p> <ul style="list-style-type: none"> • clarify and define specific terms • list feedstocks for the pathways • set performance indicators and milestones for Pathway 3 • use an inter-disciplinary expert panel to assess technologies • mandate social impact assessment under Pathway 3. <p>There was also a suggestion to be less prescriptive about technology characteristics and maturity, and focus on outcomes and benefits, and small-scale facilities suited to regional areas.</p>	

Question 2	<p>Respondents suggested a transition based on:</p> <ul style="list-style-type: none"> • demonstrating ability to obtain and retain a social licence over at least five years of operation • performance monitoring and evaluation of set criteria • insurance and guarantees to manage technology risk, performance and facility cost • proving commercial viability and compliance of relevant energy outputs with market standards • independent expert assessment. 	As there is now only one pathway instead of three, there is no need to demonstrate the 'transition' between pathways.
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Safeguarding the waste hierarchy

Principles and questions

Principle 2	<p>The Queensland Government must consistently apply the waste hierarchy. Regulation and policy must ensure that energy recovery does not undermine recycling, and that disposal does not undermine appropriate energy recovery.</p>
Question 3	<p><i>(Question 1 in the discussion paper)</i></p> <p>Do you agree that energy should be extracted from residual waste materials rather than disposing of those materials to landfill, if there are no other available alternatives for reusing or recycling the waste materials?</p>

Feedback received

	Feedback	Department's response
<p>Principle 2</p> <p>Question 3</p>	<p>Some respondents supported the principle, but did not necessarily agree with all of the elements of the current waste hierarchy and their priority order. Some respondents suggested that:</p> <ul style="list-style-type: none"> • fuel recovery should be elevated to above energy recovery to the level of recycling • separating fuel recovery from other forms of energy was not justifiable • landfill gas capture and combustion may sometimes provide greater greenhouse gas reductions compared to thermal EfW • the waste hierarchy should be consistent with the 2018 National Waste Policy: Less waste, more resources • the hierarchy should be applied flexibly, and include a proximity principle consideration to accommodate regional and remote areas where, due to tyranny of distance, EfW may provide a preferable outcome to recycling for large quantities of agricultural organic waste feedstock. <p>Some respondents did not support Principle 2, citing concerns about the health, environmental and social risks of mixed waste thermal EfW. A few went on to call for an outright ban or tax on mixed waste thermal EfW.</p>	<p>The suggestions have been noted.</p> <p>No changes have been made to the waste hierarchy, which is enshrined in the <i>Waste Reduction and Recycling Act 2011</i>.</p>

Safeguarding the waste hierarchy - defining residual waste

Principles and questions

Principle 3	<p>Energy recovery is only appropriate for residual wastes which it is not practically or economically viable to recycle</p> <p>To ensure that EfW does not undermine reuse and recycling, Principle 3 proposed to limit EfW to residual waste that is not practically or economically viable to recycle.</p>
Question 4	What role should facility operators, collection contractors and local councils be expected to play in ensuring that only appropriate residual waste is accepted for energy recovery?
Question 5	What should the requirements be for safeguarding current and future resource recovery? Does the solution involve segregation, pre-processing or both?
Question 6	Should the Queensland Government ban specific materials from landfill, or from both landfill and EfW facilities?

Feedback received

	Feedback	Department's response
Principle 3	<p>Some respondents agreed with this principle, but sought a clearer definition of 'residual waste'. Others called for non-recyclable materials to be allowed as EfW feedstock, and for actions (e.g. price-based mechanisms) to ensure recycling remains a preferred option.</p> <p>Several respondents disagreed with limiting energy recovery to residual waste, citing concerns that:</p> <ul style="list-style-type: none"> • EfW may sometimes provide a better economic and/or environmental outcome compared to recycling • restricting feedstock would affect financial viability. 	<p>Concerns have been noted.</p> <p>Waste avoidance, reuse and recycling remain top priorities.</p> <p>'Residual waste' has been defined more clearly to refer specifically to waste that is not 'technically, environmentally, and economically practicable to recycle'.</p>
Question 4	<p>Respondents identified the following roles:</p> <p>Collection contractors' role: Implement measures to facilitate, enforce, raise awareness of, and improve performance of source segregation.</p> <p>Facility operators' role: Adopt appropriate waste acceptance protocols, comply with environmental authority, and demonstrate that no better value can be derived from the feedstock</p> <p>Local government role:</p> <ul style="list-style-type: none"> • facilitate weekly food waste collection, cost-effective source segregation and drop off services • maximise material recovery through contracts, and establish feedstock agreements between all parties • invest in waste sorting, recycling, and feedstock screening • define a materials management strategy aligned with the waste hierarchy and ensure materials have a clear pathway to market. <p>In addition, some respondents suggested a role for the State Government, including :</p> <ul style="list-style-type: none"> • create viable remanufacturing and recycling industries • conduct unannounced compliance checks on facilities • support councils to incentivise waste reduction and segregation programs and to monitor waste from point of generation to recovery. 	<p>Suggestions have been noted.</p> <p>Specific operational documents will be developed to support the policy, including model operating conditions for EfW facilities, which would apply to the holder of the relevant environmental authority (i.e. the facility owner/ operator).</p>
Question 5	<p>Most respondents favoured a solution that included source segregation (alone or in combination with pre-processing). One submission suggested that the distance to facilities may make centralised pre-processing less desirable than source segregation in</p>	<p>Suggestions have been noted.</p> <p>To meet the targets of the waste strategy, it is anticipated that better separation of waste at source will</p>

	Feedback	Department's response
	<p>remote parts of Queensland.</p> <p>Several respondents suggested that the solution would be dependent on the waste stream, or should only be considered if practical and economically feasible.</p> <p>Two respondents expressed a preference for pre-processing at an EfW facility, while others suggested there could be a conflict of interest in requiring proponents to pre-process their own feedstock.</p> <p>The following additional measures were suggested:</p> <ul style="list-style-type: none"> • greater emphasis on compliance and education and behaviour change campaigns • tax incentives to encourage waste reduction and segregation • investment in source segregation and pre-processing facilities • exemptions for recycling residues from any further segregation or pre-processing requirements • introduction of bottle banks and collection points for recyclates • ban mixed waste incineration and other technologies that don't support reuse and recycling • procurement policies and incentives to develop recycled commodity markets. 	<p>be required, however consideration of mandatory requirements for source segregation or pre-processing is not required at this time.</p> <p>Proponents are required to demonstrate that the proposed feedstock meets the definition of residual waste (i.e. 'not technically, environmentally and economically practicable to recycle'). Additional guidance will be provided in an operational guideline.</p> <p>DES is currently implementing a kerbside collection project that will help councils identify best available kerbside collections arrangements that might warrant detailed investigations. Certain arrangements may contribute to reducing the amount of recyclates in residual waste streams. If appropriate, recommendations from the kerbside collection project will be incorporated into the operational guideline or inform future policy decisions by the Queensland Government.</p>
Question 6	<p>Several respondents supported landfill bans that:</p> <ul style="list-style-type: none"> • are implemented along with product stewardship schemes • are nationally coordinated to prevent material leakage and market distortions across jurisdictions • direct materials to reuse and remanufacturing, not incineration • apply to materials with recoverable energy content, organic waste, recyclates, textiles, e-waste, and problematic wastes. <p>Some respondents supported EfW bans, including bans on:</p> <ul style="list-style-type: none"> • low calorific value materials • incineration of mixed waste • tyres and tyre-derived fuels • refuse-derived fuels • materials that are toxic when burned. <p>Conversely, several respondents opposed EfW bans if the required energy output can be achieved, on the basis that EfW represents a better outcome than landfill. It was suggested that a ban would be justifiable if EfW would result in intractable residues, or environmental harm.</p> <p>Two respondents recommended that materials banned from EfW should also be banned from landfill.</p> <p>Other safeguard mechanisms suggested included:</p> <ul style="list-style-type: none"> • EfW and landfill ban on recyclable materials such as plastics • applying an increasing levy to EfW and/or landfill • gradually decreasing material acceptance at EfW facilities to match maturity in recycled commodity markets and achievement of the state recycling targets • requiring pre-treatment of putrescible waste going to landfill to make it inert, prior to introducing a landfill ban. 	<p>Suggestions have been noted. No changes required.</p> <p>Investigation of landfill disposal bans (and by extension EfW bans) has been identified as an action under the waste strategy as an enabler to stimulate supply of feedstock for recycling.</p> <p>Any recommendations of the investigation relevant to the EfW policy will be considered during the review of the EfW policy.</p>

Safeguarding the waste hierarchy - changes in residual waste

Principles and questions

Principle 4	<p>The composition of residual waste will change over time as recycling improves and Queensland transitions to a circular economy. EfW facilities must be designed to accommodate this change.</p> <p>It is important that EfW facilities, for mixed residual waste, can adapt to changes in the residual waste stream over time. Principle 4 was proposed as a means of ensuring facilities consider and plan for these changes.</p>
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Feedback received

	Feedback	Department's response
Principle 4	<p>All submissions supported Principle 4, with a few registering some concerns.</p> <p>One respondent viewed the requirement for facilities to be 'designed to accommodate this change' as a measure of policy uncertainty for investors and felt it would be difficult to define. Another called for the policy to be flexible in permitting the use of waste streams that are unlikely to change over time.</p>	<p>The feedback has been noted.</p> <p>The EfW policy requires proponents to demonstrate how their facilities can accommodate changes to residual waste over time.</p>

Promoting genuine energy recovery

Principles and questions

Principle 5	<p>To be considered genuine energy recovery, thermal EfW facilities must meet a minimum energy efficiency threshold that is consistent with international best practice</p> <p>EfW is preferred over landfill partly because it recovers energy that can offset non-renewable energy sources. This benefit diminishes with the amount of energy recovered. Principle 5 proposed to introduce an energy recovery criteria to distinguish thermal EfW from incineration for disposal. It was further suggested to adopt the European R1 Energy Efficiency Criteria and threshold in Qld.</p>
Question 7	Should thermal EfW processes be required to meet the European R1 Criteria? Why/why not?

Feedback received

	Feedback	Department's response
Principle 5 & Question 7	<p>Most respondents across all stakeholder groups agreed with Principle 5. Some explicitly supported the use of the R1 criteria because it is a known standard accepted by industry and financiers.</p> <p>Other respondents expressed reservations that the R1 criteria, derived in Europe, may not be an appropriate mandatory criteria for Queensland because:</p> <ul style="list-style-type: none"> • it does not allow for varying climatic conditions across the state as increased ambient temperatures can impact the ability to achieve R1 • smaller facilities inherently achieve lower R1 values and would have difficulty meeting the R1 threshold • smaller facilities may incur a significant compliance burden • there is less demand for domestic heat outputs in Queensland compared to the EU • it is unsuitable for all situations, such as using non-waste fuels blended with a waste material in a thermal process • it does not recognise that lower calorific waste streams may contain materials that are desirable for reasons other than energy recovery. <p>The following alternative recommendations were put forward:</p> <ul style="list-style-type: none"> • reduce the R1 threshold to the equivalent of converting 20% of the energy generated from the waste into electricity only • require produced energy to be exported to the grid, otherwise the facility should be classified as a waste disposal facility • adopt fundamental principles to guide energy efficiency: <ul style="list-style-type: none"> ○ the waste must replace a primary energy source ○ the majority of waste must be consumed ○ more energy must be generated than is consumed ○ energy generated must be recovered and used. 	<p>Concerns and suggestions have been noted.</p> <p>The R1 criteria applies to thermal EfW activities processing municipal solid waste, commercial and industrial waste, and construction and demolition waste.</p> <p>Facilities below the R1 threshold will be regarded as waste disposal facilities. The Queensland Government may consider extending the levy to apply to waste disposal via thermal destruction, however this is outside the scope of the EfW policy.</p> <p>There will be an expectation that the criteria would apply to relevant existing facilities five years after commencement of the EfW policy.</p> <p>DES will develop suitable R1 correction factors to account for Queensland's climate, other thermal processes that produce a range of energy outputs (e.g. pyrolysis and gasification), and facility sizes. These correction factors will be stipulated in the supporting operational guidelines, and be incorporated into the EfW policy during its review.</p>

Managing potential environmental impact

Principles and questions

Principle 6	<p>Queensland should adopt international best practice standards and guidelines for managing the environmental impacts of EfW technologies</p> <p>Under Queensland's existing regulatory framework, a proponent for an EfW facility would be required to obtain an environmental authority to lawfully operate the facility. Principle 6 proposed the adoption of international best practice to manage and regulate the impacts of EfW technologies.</p>
Question 8	Do you agree that the European BREF for Waste Incineration and BREF for Waste Treatment are appropriate guidance documents for Pathway 2 technologies? Why/why not?

Feedback received

	Public feedback	Department's response
Principle 6 & Question 8	<p>Most respondents agreed with Principle 6 and the adoption of the BREFs. There was a general call to:</p> <ul style="list-style-type: none"> • set clear environmental monitoring and reporting expectations • use independent third-party auditing • consistently apply environmental requirements to all pathways • develop regulations to support the policy • strengthen and resource compliance activities • consider transitional arrangements for facilities. <p>Some respondents also recommended adoption of the European Environmental Bureau recommendations on the revised BREF as contained in <i>Implementing EU environmental standards for waste treatment, Guidance for Non-governmental Organisations on the EU Waste Treatment BREF</i>.</p> <p>Other respondents acknowledged that the BREFs may be suitable for Queensland but felt that there were uncertainties regarding the implementation costs, the underlying operational data, and inadequate coverage of some waste streams (hazardous and biologically-treated wastes) and technologies (pyrolysis and gasification). A more cautious approach was suggested involving voluntary adoption of the BREFs after investigating their applicability to Queensland and modification for Queensland context.</p> <p>Several respondents disagreed with both Principle 6 and the adoption of the BREFs, suggesting that the existing approvals and management framework is sufficient.</p> <p>Other concerns were noted, including:</p> <ul style="list-style-type: none"> • lack of confidence in the waste management industry and government regulators in terms of compliance and enforcement • the impacts on small to medium sized projects of adding new or more restrictive regulation on EfW compared to the rest of the waste sector • the need for best practice to be appropriate to the nature, scale, and potential environmental impacts of the EfW facility • the need to consider standards from other jurisdictions (e.g. USA) where waste-to-fuels technologies are deployed. 	<p>These concerns and suggestions have been noted.</p> <p>The EfW policy adopts the 2019 (draft) BREF for Waste Incineration, and the 2018 BREF for Waste Treatment. It is expected that the 2019 (draft) BREF will be formally adopted by the EU by end of 2019. Should this not occur, the EfW policy will be reviewed as necessary.</p> <p>More broadly, if there are any substantial changes to the BREFs, DES will review the ongoing suitability of the EfW policy and associated operational guidelines.</p> <p>There will be an expectation that when finalised, the operational guidelines would apply to relevant existing facilities five years after commencement of the EfW policy.</p>

Planning approvals for EfW facilities

Principles and questions

Principle 7	<p>Queensland needs a clear, consistent and well-informed assessment process for new waste technologies</p> <p>In Queensland, there are several assessment pathways and legislative frameworks for seeking planning and environmental approvals for waste and resource recovery infrastructure, including EfW infrastructure. Principle 7 reinforced the need for a clear and consistent assessment process for new EfW technologies.</p>
Question 9	What aspects of the current planning and assessment framework do you think require clarification?
Question 10	How can the planning process support effective community engagement?
Question 11	What role should the government play in assessing significant EfW proposals?

Feedback received

	Public feedback	Department's response
Principle 7	<p>Most respondents agreed with Principle 7.</p> <p>There were requests to:</p> <ul style="list-style-type: none"> • minimise the costs and timeframes to obtain approvals • review approval requirements for EfW facilities proposed on council waste sites and consider the benefits of such colocation • review requirements under the Planning Regulation 2017 to ensure consistency in assessment and regulation <p>One respondent recommended further engagement with local government and other stakeholders on any proposed planning reforms, prior to finalising the EfW policy.</p>	<p>The feedback has been noted.</p> <p>A review of the planning and assessment framework for the waste and resource recovery sector will be undertaken under the waste strategy, and the Resource Recovery Industries 10-year Roadmap and Action Plan, to determine whether any changes to the framework are required.</p> <p>The EfW policy will be updated if necessary to accommodate recommendations of the review.</p>
Question 9	<p>A few respondents felt that the current framework is generally clear and appropriate, but consistent application of assessment and regulatory processes was needed to avoid the perception that EfW will be treated differently. Areas nominated for clarification included:</p> <p><i>State coordination</i></p> <ul style="list-style-type: none"> • grounds on which the Coordinator-General can assess a project without departmental input/approvals • the triggers for state coordination of the approval process. <p><i>Assessment</i></p> <ul style="list-style-type: none"> • whether an environmental impact statement would be required • whether EfW would be exempt from council planning jurisdiction • how social licence will be assessed in the face of vocal and determined opposition from some sections of the community • how the state will ensure technical competency of assessors • how proposals will be assessed where the council lacks the necessary resources and experience • the responsibilities of councils in assessing and regulating EfW. <p><i>Licensing and regulation</i></p> <ul style="list-style-type: none"> • EAs should not be issued without certainty that conditions can be realistically met. Where the EA is approved, communicate clearly to proponents that granting the EA is not a direction to the local government to grant the development approval (DA). 	<p>The feedback has been noted. An operational guideline will be developed to support the EfW policy. Clarification on the assessment pathways under the current planning and assessment framework will be provided in the operational guideline.</p>

	<ul style="list-style-type: none"> • how all three levels of government ensure safe air quality <p>Other recommendations included:</p> <ul style="list-style-type: none"> • reduce the duplication in licensing and regulation of methane gas activities (e.g. landfill gas combustion, anaerobic digestion) between DES and the Petroleum and Gas Inspectorate of the Department of Natural Resources, Mines and Energy. • prioritisation of community well-being and public health under planning law. • establishment of a strategic waste planning and development consent framework, including for projects of regional or state significance. 	
Question 10	<p>Respondents suggested several means by which the planning process could support community engagement, including by:</p> <ul style="list-style-type: none"> • legislating it as a required first (or early) step of the process • managing consultations to clearly defined terms of reference • completing scientific and risk assessments before planning • establishing community engagement groups and citizens' panels to provide input into planning decisions • establishing one or more fully independent bodies to advise communities and oversee the engagement process • mandating development and approval of stakeholder engagement plans prior to commencing engagement • requiring adherence to the International Association of Public Participation (IAP2) Public Participation Spectrum • requiring regular public reporting on facility performance to give communities confidence • ensuring the policy is supported by regulatory measures that ensure the fair treatment of people and the environment throughout the planning and development process. <p>Two respondents felt that the existing community engagement mechanisms were sufficient, and that the requirements should be no different to other major projects (e.g. motorways, rail links, mines, airports, harbours).</p> <p>One respondent suggested that there could be a conflict of interest where councils have to engage with communities on both waste planning applications and waste procurement decisions.</p>	<p>The feedback has been noted.</p> <p>It is noted that many of the comments relate to the broader planning framework and are not specific to just EfW proposals.</p> <p>A review of the planning and assessment framework for the waste and resource recovery sector will be undertaken under the waste strategy, and the Resource Recovery Industries 10-year Roadmap and Action Plan, to determine whether any changes to the framework are required.</p> <p>Any recommendations of the review relevant to the EfW policy will be considered during the review of the EfW policy.</p>
Question 11	<p>Several respondents felt that the State Government should lead assessment of significant EfW proposals, in the manner that wind farm developments are assessed under the State Development Assessment Provisions. A few respondents nominated the Office of the Coordinator General or a State Government expert panel for the role. Reasons provided to support this position included:</p> <ul style="list-style-type: none"> • that impacts and benefits of EfW facilities go beyond the individual council in which they are situated • that most councils might lack the technical capabilities to assess significant proposals • to help ensure a level playing field and consistency in assessment without regard to local political influences • that temporary local planning instruments are insufficient to deal with the scale and complexity of the waste framework. <p>One respondent called for the State to financially support councils that are defending a disproportionate number of waste-related development approvals decisions.</p> <p>Some respondents felt that the State should coordinate and advise on significant proposals, but that the final decision should be made by council. Further, the State should be able to call in and assess applications on a priority basis, if the council does not act in the community's interests or if assessments are unreasonably delayed.</p> <p>Some suggested that the State should set the policy framework and leave the assessment to independent EfW experts, because the State might lack the technical capability to assess applications,</p>	<p>The feedback has been noted.</p> <p>A review of the planning and assessment framework for the waste and resource recovery sector will be undertaken under the waste strategy, and the Resource Recovery Industries 10-year Roadmap and Action Plan, to determine whether any changes to the framework are required.</p> <p>Any recommendations of the review relevant to the EfW policy will be considered during the review of the EfW policy.</p>

	<p>particularly for technologies new to Australia and Queensland.</p> <p>Other respondents went beyond assessment of proposals, and suggested that the government take an active role in developing EfW infrastructure and the sector. Recommendations included:</p> <ul style="list-style-type: none">• securing land in suitable areas to lessen community impacts• leading public discussion and community awareness• providing research grants to investigate improvements to current processes and development of new processes.	
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Community engagement

Principles and questions

Principle 8	<p>Proponents of EfW facilities must demonstrate that they have engaged appropriately and transparently with communities impacted by the proposed facilities</p> <p>EfW can be a particularly divisive topic in communities. Ineffective community engagement on EfW can lead to community distrust of the waste management and resource sector at large, and could result in rejection of otherwise technically-and environmentally-sound proposals. Neither of these outcomes are in the best interests of Queenslanders. Principle 8 was proposed to help ensure proponents engage effectively with communities.</p>
Question 12	Do you agree with the proposed stakeholder engagement principles and responsibilities? Is there anything you would add or change?
Question 13	How could proponents demonstrate that they have followed the proposed principles of engagement?
Question 14	Should proponents of EfW facilities be required to demonstrate that they have obtained a social licence to operate the proposed facility? How would this be demonstrated?

Feedback received

	Public feedback	Department's response
Principle 8	<p>Almost all proponents agreed with Principle 8.</p> <p>One respondent suggested that small-scale, at source facilities should be exempted from community engagement, whilst another was concerned about bias in proponent-led engagement.</p> <p>The principal concern of environmental groups and the community was around greater empowerment and involvement of communities in the planning process (e.g. through citizens' panels).</p> <p>Industry respondents were primarily concerned about the uncertainty and objectivity in defining social licence and ensuring fact-based decision-making in the face of vocal opposition.</p>	<p>The feedback has been noted.</p> <p>It would be reasonable to expect some community engagement for any level of proposal, however it would be expected that this would be scalable depending on size of facility and location.</p> <p>The principle has been carried forward into the EfW policy.</p>
Question 12	<p>Almost all respondents across all stakeholder groups agreed with the stakeholder engagement principles. Respondents also suggested the following for consideration:</p> <ul style="list-style-type: none"> adopt a risk-based approach to stakeholder engagement develop, publish for comment, and approve stakeholder engagement plans prior to commencing any engagement assess proposals on facts consider the role of governments in educating the public on EfW legislate community engagement requirements with penalties for misleading the public conduct independent research into community knowledge, attitudes and social acceptance of the waste industry to identify the key drivers of social licence and develop strategies to support future community engagement. <p>A few respondents did not agree with the community engagement principles and responsibilities, over concerns that they:</p> <ul style="list-style-type: none"> are global ideals and not specific enough to be of practical use are weighted in favour of proponents who could be biased involve the State and councils who have a vested interest in encouraging EfW. <p>One proponent called for stakeholder engagement to be undertaken in accordance with the IAP2 Public Participation Spectrum rather than prescribing how community engagement is to be undertaken.</p>	<p>The feedback has been noted.</p> <p>The stakeholder engagement principles have been amended to accommodate several suggestions, including:</p> <ul style="list-style-type: none"> requiring a stakeholder engagement plan with an environmental authority application highlighting the role of governments in public education on EfW.

	Public feedback	Department's response
Question 13	<p>Respondents suggested the following means of demonstrating adherence to the engagement principles by:</p> <ul style="list-style-type: none"> documenting and reporting on the process and outcomes, including how feedback has been (or will be) addressed providing proof of adherence to an engagement plan obtaining endorsement of the process by a citizens' panel; or through an independent audit/assessment direct involvement of the assessing agency in the engagement process measurement against the IAP2 Public Participation Spectrum. <p>One proponent was concerned that demonstrating adherence to the principles could introduce a burden for small and medium projects.</p>	<p>The feedback has been noted.</p> <p>The EfW policy will include a requirement for proponents to report on the community engagement undertaken and how stakeholder feedback has been accommodated.</p>
Question 14	<p>Most respondents from all stakeholder groups, except industry, agreed with a social licence requirement and suggested this could be demonstrated by:</p> <ul style="list-style-type: none"> conducting an independent community survey to determine the success or failure of a consultation process providing the results of the engagement process including an outline of the level of community support for a project, and how stakeholder concerns have been addressed measurement against indicators agreed with the government. <p>The views of industry respondents were mixed. A few respondents suggested that social licence should not be the sole responsibility of the proponent, and called on the State to publicly support good quality proposals, and to intervene when a minority refuse social licence for reasons which are not in the best interest of the broader community.</p> <p>Some respondents felt that the social licence concept was important, but it was too subjective and difficult to define and demonstrate, and that it should not require demonstrating universal support for a project.</p> <p>A few respondents did not support a social licence requirement, and suggested that:</p> <ul style="list-style-type: none"> social licence should be assumed if a facility is proposed in response to a state or local government tender completion of an environmental assessment commensurate with the scale and impact of the proposed facility should suffice community engagement can be sufficiently established through the current development assessment process greater emphasis be placed on the community engagement conducted. 	<p>The feedback has been noted.</p> <p>The social licence concept is an important one, but it is not proposed to introduce a social licence requirement at this time as it is unclear how this could be enacted or enforced under the <i>Environmental Protection Act 1994</i> or the <i>Waste Reduction and Recycling Act 2011</i>.</p> <p>Social licence is an evolving area and there is as yet, no consensus or standard on how it could be objectively measured or demonstrated.</p> <p>Proponents will be encouraged to adopt processes and practices to encourage social licence bespoke to their proposals. Local government also has a significant role to play in working with the community and the proponent.</p>
	<p>Respondents also suggested the following alternative/additional matters for consideration:</p> <ul style="list-style-type: none"> maintain a role for councils in determining and defining social licence during community and industry engagement require a scientific committee to evaluate any proposed EfW technology, prior to seeking community approval, and lodging the planning application require proponents to conduct a social impact assessment and design effective strategies to mitigate and manage adverse impacts. Local and state government should work with proponents to review the social impact assessment. 	<p>The feedback has been noted, and where relevant may be considered as part of the review of the planning and approvals framework (see the response to feedback on Principle 7).</p> <p>The Queensland Government will work with local government as necessary to consider the best route for engagement.</p>

Appendix A: Stakeholders who made a submission

Environmental groups

1. Boomerang Alliance
2. Boonah Organisation for a Sustainable Shire
3. Environmental Defenders Office (Qld) Inc.
4. Ipswich Residents Against Toxic Environments
5. Logan and Albert Conservation Association
6. Queensland Conservation Council
7. Wide Bay Burnett Environment Council Inc.

Industry

8. Australian Council of Recycling
9. Australian Food and Grocery Council
10. Australian Industrial Ecology Network
11. Australian Industry Group
12. Australian Landfill Owners Association
13. Australian Sustainable Business Group
14. Bingo Industries
15. Bio Waste Solutions
16. Bioenergy Australia
17. BioJet
18. Broadspectrum Pty Ltd
19. Caltex Australia
20. Cement Australia
21. Cement Concrete & Aggregates Australia
22. Cement Industry Federation
23. Cleanaway
24. Concise Marketing
25. Finn Biogas
26. FrontRock
27. Fulcrum BioEnergy, Inc
28. Glencore Technology
29. Hitachi Zosen
30. JJ Richards & Sons Pty Ltd (private & confidential)
31. Licella Holdings, and iQ Renew Pty Ltd
32. Queensland Farmers Federation
33. Ramboll
34. Recovered Energy Australia
35. REMONDIS
36. ResourceCo
37. Rowland Engineering
38. Simms Metal Management
39. SUEZ
40. Tyre Stewardship Australia
41. Veolia
42. Waste Management and Resource Recovery Association of Australia
43. Waste Tech Industries

Local Government

44. Moreton Bay Regional Council
45. Logan City Council
46. City of the Gold Coast
47. Bundaberg Regional Council
48. Ipswich City Council
49. Local Government Association of Queensland

Academics and consultants

- 50.Full Circle Advisory
- 51.James Cook University
- 52.METTS Pty Ltd
- 53.Queensland University of Technology
- 54.University of Southern Queensland

Community

Twenty-seven (27) submissions were received from the general community