

LGIAsuper - Energy Super
DBF

**Actuarial Valuation
as at 1 July 2021**

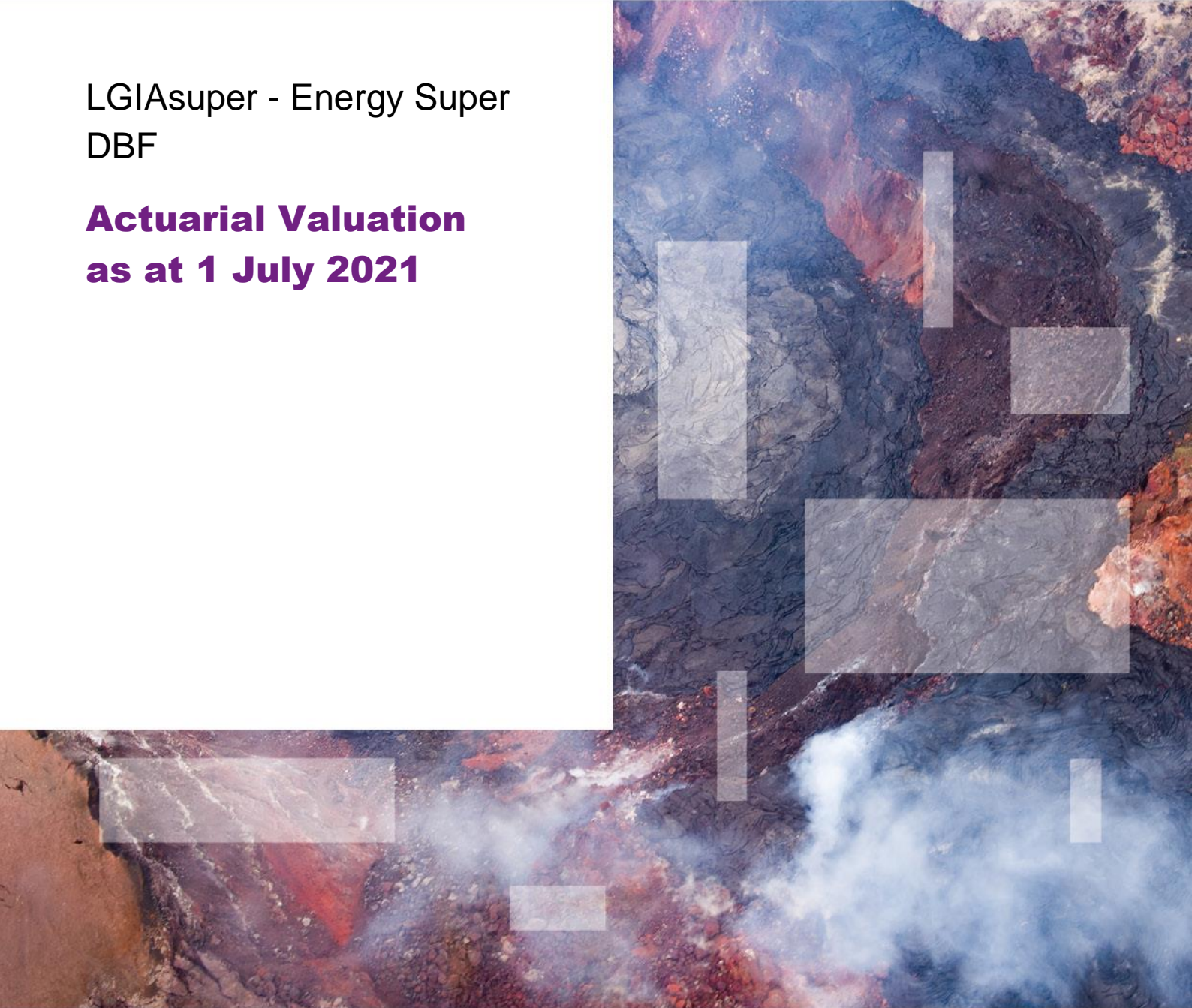


Table of Contents

Section 1 : Purpose and Summary1

Section 2 : Background and Data5

Section 3 : Assets and Investment Strategy.....7

Section 4 : Valuation Method, DBF Experience and Actuarial Assumptions..... 11

Section 5 : Insurance Arrangements 14

Section 6 : Solvency and Funding Status Measures 15

Section 7 : Valuation Contribution Results 18

Section 8 : Sensitivity Analysis and Material Risks..... 20

Appendix A : Summary of Benefits 22

Appendix B : Details of Membership..... 24

Appendix C : Consolidated Revenue Accounts 26

Appendix D : Valuation Method and Assumptions 29

Appendix E : Actuarial Statements required under SPS 160 for Energy Super DBF 32

This page is intentionally blank

Section 1: Purpose and Summary

LGIAsuper provides benefits which are of the “*defined benefit*” type where benefits are defined by salary and period of membership. There are three divisions of defined benefit arrangements within LGIAsuper, all of which are closed to new members:

- Regional Defined Benefits Fund (Regional DBF)
- City Defined Benefits Fund (City DBF)
- **Energy Super Defined Benefits Fund (Energy Super DBF)**

This report covers the Energy Super DBF arrangements.

There are also a significant number of Accumulation members of the Accumulation Benefits Fund (ABF) within LGIAsuper. The ABF is open to new members. Additional accumulation benefits are also provided within the ABF for most Defined Benefit members.

A regular actuarial review of LGIAsuper is necessary to:

- examine the sufficiency of each DBF’s assets in relation to members’ accrued benefit entitlements
- determine the recommended employer contribution rate required to ensure that each DBF maintains a satisfactory financial position
- examine the suitability of the insurance and investment arrangements
- satisfy Clause 4.28 of the Trust Deed, and
- meet legislative and prudential standard requirements, in particular paragraph 23 of Prudential Standard 160 Defined Benefit Matters (“SPS160”).

This report covers the Energy Super DBF and has been prepared for the Trustee, LGIAsuper Trustee in my capacity as RSE Actuary to LGIAsuper. The effective date of this actuarial valuation is 1 July 2021 following the establishment of the Energy Super DBF within LGIAsuper after the merger of the two funds.

This report has been prepared in accordance with Professional Standard 400 issued by the Institute of Actuaries of Australia dated March 2021. Guy Holley of Mercer Consulting (Australia) Pty Ltd conducted the previous valuation as at 30 June 2019 with the results set out in a report dated 6 November 2019.

Reliance statement and data

This report is provided subject to the terms set out herein and in our engagement letter signed 11 May 2021 and the accompanying Terms and Conditions of Engagement. This report is provided solely for the Trustee’s use and for the specific purposes indicated above. It may not be suitable for use in any other context or for any other purpose.

Except where we expressly agree in writing, this report should not be disclosed or provided to any third party, other than as provided below. In the absence of such consent and an express assumption of responsibility, no responsibility whatsoever is accepted by us for any consequences arising from any third party relying on this report or any advice relating to its contents.

The Trustee may make a copy of this report available to its auditors, to employers who contribute to LGIAsuper and to any person to whom the Trustee may be required to provide a copy under relevant legislation, but we make no representation as to the suitability of this report for any purpose other than that for which it was originally provided and accept no responsibility or liability to the Trustee's auditors or the participating employers or any other parties in this regard. The Trustee should draw attention to the provisions of this paragraph when passing this report to these or any other parties.

In preparing this valuation, we have relied upon information and data provided to us orally and in writing by the Trustee and other persons or organisations designated by the Trustee. We have relied on all the data and information provided, including LGIAsuper Trust Deed provisions, membership data and asset information, as being complete and accurate. We have not independently verified the accuracy or completeness of the data or information provided, but we have performed limited checks for consistency. The data and information we have relied upon is shown in Section 2.

In our opinion, all calculations are in accordance with requirements of applicable legislative requirements, and the procedures followed and the results presented conform to applicable actuarial standards of practice.

Employer Contributions

In the absence of any special circumstances and subject to satisfying any industrial agreements, we recommend that from 1 July 2021 each Energy Super DBF employer continues the existing contribution holiday in respect of Defined Benefit members.

We expect that the contribution holiday outlined above may be able to be maintained, subject to the financial experience of Energy Super DBF, beyond the completion of the next actuarial valuation. However, if the financial experience of Energy Super DBF deteriorated significantly over this period, then it may be necessary for contributions to resume. We continue to recommend that the Trustee review the financial position of the Energy Super DBF on at least an annual basis.

Funding Status Measures

Vested Benefits

Vested benefits are the benefits payable if all members voluntarily resigned from service. As at the valuation date, the ratio of the net assets to vested benefits was 138.5%.

The Energy Super DBF is in a “*satisfactory financial position*” if the net realisable value of the assets exceeds the vested benefits. At the valuation date of 1 July 2021, the net assets of the exceeded the vested benefits and the Energy Super DBF was in a satisfactory financial position.

Assuming in respect of Energy Super DBF:

- a. the benefits described in the Trust Deed remain unchanged,
- b. employer contributions are paid at the recommended rate and
- c. the future experience is in accordance with the assumptions made in this actuarial valuation

then the net assets of Energy Super DBF should remain in excess of the corresponding vested benefits of the Energy Super DBF up to 1 July 2021.

Present Value of Accrued Benefits

The present value of accrued benefits is the actuarial value (using the assumptions and methodology detailed in this report) of the expected future benefits payable to the current members and their dependents in respect of membership completed up to the date of the actuarial investigation.

As at the valuation date, the ratio of the net assets to the present value of accrued benefits was 144.7%.

The net assets of the Energy Super DBF are adequate to cover the present value of the accrued benefits of Energy Super DBF members at the valuation date.

Minimum Benefits

Minimum Requisite Benefits (MRB) include member-financed benefits and the portion of the employer-financed benefit that is defined to meet Superannuation Guarantee requirements as specified in LGIAsuper's Benefit Certificate.

As at the valuation date, the ratio of the net assets to the MRB was 174.5%.

The Energy Super DBF is "solvent" if the net realisable value of the assets of the Energy Super DBF exceeds the MRBs. As at the valuation date the net assets exceeded the MRBs and the Energy Super DBF was in a solvent financial position.

Shortfall Limit

As required under SPS 160, the Trustee has set Shortfall Limit for the Energy Super DBF of 97.0%.

We have reviewed this Shortfall Limit as part of this actuarial investigation and consider that the Shortfall Limit remains appropriate.

Superannuation Guarantee

Superannuation Guarantee obligations of employers are met for members by the minimum benefits provided under LGIAsuper. The latest Benefit Certificate is dated 12 August 2021.

A Funding and Solvency Certificate dated 12 August 2021 has been issued to the Trustee corresponding to the above mentioned Benefit Certificate. The purpose of this Funding and Solvency Certificate is to specify the required Company contributions needed to fund the MRBs used to offset the Superannuation Guarantee charge. All necessary Funding and Solvency Certificates have been issued to the Trustee during the two years to 1 July 2021.

Based on the actuarial assumptions adopted in this valuation being borne out in practice, we expect that an actuary will be able to certify the solvency of the Energy Super DBF in any Funding and Solvency Certificate required during the two-year period following the valuation date.

Investments

The current investment policy adopted by the Trustee is to have the assets supporting the Energy Super DBF liabilities invested 60% in growth assets such as shares and property and 40% in defensive assets such as cash and fixed interest.

The current investment policy is considered suitable to the defined benefit liabilities of Energy Super DBF based on membership as at 1 July 2021. The Trustee regularly monitors the investment performance of the underlying investment managers and we recommend that this continues.

Insurance

In relation to Energy Super DBF, the total amount of insurance held to provide the unfunded portion of death and total and permanent disablement benefits is considered adequate as at 1 July 2021.

Experience since 1 July 2021

Given the strong financial position of the Energy Super DBF at 1 July 2021 we do not consider any of the recommendations in this report need to be reviewed in the light of recent experience.

Next Valuation

The next valuation should be held no later than 1 July 2024. Vested Benefits coverage should continue to be monitored at least annually and more frequently if warranted.



Nick Wilkinson
Fellow of the Institute of Actuaries of
Australia

7 December 2021

D: JD | TR: RDM | CR: NW | SPR: LC

Towers Watson Australia Pty Ltd
Level 16, 123 Pitt Street
Sydney NSW 2000
Australia
ABN 45 002 415 349 AFSL 229921

T +61 2 9285 4000

[https://wtwonlineau.sharepoint.com/sites/tctclient_650525_BENAU5LG21_m/Documents/04.01_Act_Valn/Deliverables/Actuarial Report 1 July 2021 - Energy.docx](https://wtwonlineau.sharepoint.com/sites/tctclient_650525_BENAU5LG21_m/Documents/04.01_Act_Valn/Deliverables/Actuarial%20Report%201%20July%202021%20-%20Energy.docx)

Section 2: Background and Data

LGIAsuper was initially established under a Trust Deed first made in 1995 as amended subsequently. LGIAsuper was originally known as the Queensland Local Government Superannuation Scheme. On 1 July 2017 the Scheme was renamed LGIAsuper. On 1 July 2011, the City Super Fund merged with the Scheme and on 1 July 2021, Energy Super merged with LGIAsuper.

Under Clause 29.1 of the Trust Deed, the Energy Super DBF employers are required to contribute at a rate as agreed between the Trustee and Employer, on the advice of the Actuary as being necessary to finance the benefits payable from the Energy Super DBF to members who are employed by that Employer.

LGIAsuper is a regulated complying superannuation fund under the SIS Act and for taxation purposes.

The Energy Super DBF is closed to new defined benefit members.

A summary of the main benefits of the Energy Super DBF is included in Appendix A of this report.

Previous Recommendations

Guy Holley of Mercer Consulting (Australia) Pty Ltd conducted the previous valuation as at 30 June 2019 with the results set out in a report dated 6 November 2019. As recommended, there has been a contribution holiday in place in respect of employer contributions for the Energy Super DBF since 1 July 2019.

Changes to benefits since the last valuation

There have been no changes to the benefits of Energy Super DBF members considered in this valuation over the three years ending 1 July 2021.

From 1 July 2021, the Superannuation Guarantee (SG) rate, being the minimum rate of superannuation employers must provide for its employees increased from 9.5% to 10.0% and is set to increase further to 12.0% over the period to 1 July 2025. We have allowed for these future changes to the SG rate in the projections covered later in this report.

Sources of Information

We have relied on the administrative records as at 1 July 2021, as currently stored on LGIAsuper's administration system.

We have relied on the audited accounts for the three years ending 1 July 2021 together with information provided LGIAsuper.

Where possible the information provided has been checked for reasonableness and is considered suitable for the purposes of this investigation.

Data

The membership details are summarised in Appendix B. In brief there were 1,214 employed defined benefit members of the Energy Super DBF as at 1 July 2021 with total salaries of \$164.5m.

We have checked a sample of the membership data for internal consistency and are satisfied as to the accuracy of this sample.

Since the previous valuation, the average attained age of Energy Super DBF members has increased from 53.3 years to 54.4 years.

All members of the Energy Super DBF at the current valuation date were present at the previous valuation. Salaries over the period since the last valuation have increased on average by 2.4% p.a. for Energy Super DBF members.

Section 3: Assets and Investment Strategy

Accounts

We have been supplied with audited accounts covering the 12 month periods to 1 July 2020 and 1 July 2021. These latest accounts were audited by BDO Audit Pty Ltd and no material qualifications were identified in the audit report dated 28 September 2021. We have also been provided with details of the notional breakdown of these accounts for each of the Employers within the Energy Super DBF.

Fair value of Assets or Net Assets

These accounts for the Energy Super DBF have been combined to produce the following consolidated accounting statement for the period 1 July 2019 to 1 July 2021.

	Energy Super DBF \$000
Net Assets available to meet liabilities as at 1 July 2019	1,220,350
Plus:	
Employer Contributions	24,964
Member Contributions	3,050
Investment returns (net of investment tax)	125,029
Less:	
Benefit payments	(141,024)
Net transfer to / from employers and accumulation division	(1,283)
Repatriation of surplus to employer / or used to fund accumulation contributions	(1,168)
Insurance costs	(3,407)
Contribution tax	(3,425)
Net Assets available to meet liabilities as at 1 July 2021	1,223,087

We have adopted the net asset value of \$1,223.1 million for Energy Super DBF in determining the contribution recommendations and Funding Status Measures at the valuation date. We note that the assets used for this valuation exclude the explicit Investment Fluctuation Reserves totalling \$16.8 million at 1 July 2021 and those assets used to meet the Trustee's Operational Risk Financial Requirement (ORFR) which are held in a separate reserve.

A breakdown of this reconciliation by Employer is provided in Appendix C.

Defined Benefit Liabilities in general

The level of the Defined Benefit liabilities does not bear the same direct relationship with the defined benefit assets as exists with accumulation liabilities (where the assets and liabilities are generally matched).

The Defined Benefit liabilities reflect membership and salary growth, whereas the supporting assets depend on a range of factors including:

- i. the level of employer contributions, and
- ii. the level of investment returns.

In this case it is the employers who bear the investment risk as the level of contributions required depends on the level of investment returns achieved.

An investment strategy to provide defined benefits which is framed to take a long-term view will often adopt relatively high levels of equity investment in order:

- i. to secure attractive long term investment returns, and
- ii. to provide an opportunity for capital appreciation and dividend growth, which gives some protection against inflation (as benefits are linked to salary growth which is also influenced by inflation).

The main constraint is that potential fluctuations in asset values mean the total asset value could fall below the level of Vested Benefits, placing the DBF concerned and possibly the entire fund in an unsatisfactory financial position.

While the impact of a sudden sharp fall in asset values can be limited by maintaining a buffer of assets over and above the level of vested benefits, the level of the buffer may never be sufficiently high to safeguard against all possible investment outcomes. However, the buffer should be at a level where the risk of the asset values falling below the level of vested benefits under a particular investment strategy is acceptable to the Trustee and the sponsoring employers.

In this regard, a lower buffer may be acceptable where the sponsoring employers are willing and able to accept short-term variations in contributions as part of underwriting the defined benefits of the DBF they participate in. In this case, short-term variations in employer contributions may result from:

- i. reducing a buffer that has grown too large, or
- ii. rebuilding a buffer that has fallen or become negative.

An alternative to consider if a DBF does not have a sufficient asset buffer above the level of Vested Benefits is to adopt a more conservative investment strategy. While this may reduce short-term fluctuations in asset values, it is also likely to reduce long-term returns and hence result in increased employer contributions in the long-term. In summary, a balance needs to be achieved between these short-term and long-term considerations in funding the defined benefit liabilities.

Defined Benefits – Investment Objective for Energy Super DBF

The Trustee's principal investment objective for the Energy Super DBF is to achieve returns in excess of CPI plus 2.0% p.a. over rolling 10 year periods.

We have taken account of the investment objectives of the Energy Super DBF and the investment guidelines under which LGIAsuper's investment managers operate in setting our actuarial assumptions in Section 4 of this report.

Investment Strategy for Energy Super DBF

In order to meet the investment objectives set for the Energy Super DBF, the Trustee has adopted a specific long term strategic allocation and ranges for each asset class as shown in the table below. The strategic asset allocation and actual allocation at 1 July 2021 are shown below:

Asset Class	Strategic Asset Allocation	Actual Allocation
Australian shares	15.0%	20.5%
International shares	16.0%	20.4%
Property	10.0%	8.3%
Infrastructure	10.0%	7.0%
Alternatives	8.0%	21.6%
Diversified Fixed Interest	33.0%	15.8%
Cash	8.0%	6.3%
Total	100.0%	100.0%

We also note that a number of changes to the Strategic Asset Allocations for the Energy Super DBF had been approved by the Trustee in May 2021 that were due to be implemented during July 2021. We do not expect these changes to have a substantive effect on the future risk/return profile for the Energy Super DBF.

Suitability of Investment Strategy for Energy Super DBF

At the valuation date of 1 July 2021, the average age of the employed members with defined benefits is 54.4 years within Energy Super DBF, indicating that a medium-term time horizon should still apply for investment purposes.

Given the age profile and the number of members expected to retire over the next three years as outlined in Appendix B, it is expected that benefit outgo will exceed contribution inflow to the Energy Super DBF. The Trustee is able to take this into account the broader fund level cash-flow profile when considering how the liquidity needs of the Energy Super DBF will be met.

The current investment strategy of the Energy Super DBF is within a range considered suitable but should be reviewed regularly (at least triennially) by the Trustee in the light of changes in membership and age profile.

The Trustee regularly monitors the investment performance of the underlying investment managers and it is recommended that this continues.

Suitability of crediting rate adopted in Energy Super DBF

Defined Benefit Section

Defined benefit members have accumulation accounts that may form part of the defined benefit. These accumulation accounts include the member contribution account which is used in the calculation of the member's defined benefits. The Trustee's crediting rate policy is to average the investment returns over the past three years. As only a small portion of the defined benefit liabilities is currently linked to the crediting rate, the smoothing of investment returns is not at present considered to be a material risk. At a high level I consider the crediting rate policy to be generally suitable, however I recommend that the Trustee conduct a review of the smoothing approach to confirm if it is still warranted.

Defined Contribution Section – Smoothed Return Option

The Trustee also provides a Smoothed Return investment option in the Defined Contribution Section of LGIAsuper, that option is closed to new members and further investments (for example rollovers) other than Employer contributions. The Trustee's crediting rate policy for the Smoothed Return investment option is to also average the actual investment returns of the Balanced Option over the past three years. The Balanced Option has a benchmark 75% exposure to 'growth' assets (compared to 60% for assets backing the Energy Super DBF).

The total account balances for Defined Contribution members invested in the Smoothed Return investment option was approximately \$116 million as at 1 July 2021.

The smoothing methodology is supported by the reserves of the Energy Super DBF as well as explicit Investment Fluctuation Reserves totalling \$16.7 million as at 1 July 2021 for certain Employers.

For Employers with no explicit Investment Fluctuation Reserves, the smoothing methodology of the Smoothed Return option is supported by the Energy Super DBF assets only, but given the strong financial position of the Energy Super DBF, we consider that the Smoothed Return investment option is adequately supported.

For Employers with explicit Investment Fluctuation Reserves, we expect that these reserves, in addition to the Energy Super DBF assets, will remain sufficient to support the smoothing methodology of the Smoothed Return option. The Trustee could also consider dissolving these reserves and bringing them into the assets supporting the Energy Super DBF.

At a high level I consider the crediting rate policy to be generally suitable, however I recommend that the Trustee conduct a review of the smoothing approach to confirm if it is still warranted.

Section 4: Valuation Method, DBF Experience and Actuarial Assumptions

To carry out an actuarial valuation of the defined benefit liabilities of the Energy Super DBF, it is necessary to decide on:

- the valuation method to be adopted, and
- the assumptions as to the factors which will affect the cost of the benefits to be provided in the future.

Target funding method

The funding method adopted at the previous valuation was the Target Funding method. This funding method remains appropriate for the Energy Super DBF, given the declining nature of the active/employed membership.

Under this method, the Employer contribution rate required to provide a target level of coverage of a particular benefit liability measure is determined. The financing objective adopted at the previous investigation was to maintain the value of the Fund's assets in respect of defined benefit members at least equal to 110% of Defined Benefit Vested Benefits. I consider that this financing objective remains appropriate.

Under this method of financing, the level of the Employer contribution may vary from time to time to ensure that the Fund remains on course towards its financing objective (i.e. 110% coverage of Defined Benefit Vested Benefits).

I consider that the Target Funding method is suitable in the Fund's current circumstances as it allows the recommended contribution rate to be determined specifically to meet the Fund's financing objective.

For illustration purposes, we also consider the long-term cost of future service defined benefits (including expected expenses, insurance premiums and contribution tax) expressed as a percentage of future defined benefit member salaries.

Experience and Valuation Assumptions

It is important when setting the valuation assumptions to examine the experience of the Energy Super DBF to see whether the previous assumptions have been borne out in practice. A summary of the major items of experience since the last valuation is given in the following paragraphs.

Further details on the valuation assumptions adopted for Energy Super DBF are set out in Appendix E.

Investment Return

The assumption for investment returns at the last valuation was 4.5% p.a. (net of administration and investment fees and investment tax). The Energy Super DBF's investment returns over the two years to 1 July 2021 (net of administration and investment fees and investment tax) have been as follows:

Year Ending 30 June	Investment Return (net of administration and investment fees and investment tax)	Smoothed Crediting Rate
2020	-1.9%	4.1%
2021	14.3%	5.7%
Average over the 2 years	5.9% p.a.	4.9% p.a.

The average investment return over two years of 5.9% p.a. was 1.4% p.a. higher than the assumed rate. This has had a positive effect on the Energy Super DBF financial position in relation to defined benefit style liabilities and the Energy Super DBF surplus.

The Crediting Rate applied to smoothed additional accounts over the two year period of 4.9% p.a. has been 1.0% p.a. lower than the return earned by the Energy Super DBF assets. This gap is due to the smoothing formula applied in determining the smoothed crediting rate and will have resulted in a minor gain on the Energy Super DBF financial position over the two year period to 1 July 2021.

We also note that from 1 July 2021 onwards, the expense deduction from the Energy Super DBF assets is 0.33% pa.

For this valuation, we have retained the long term future investment return of 4.5% p.a. (net of administration and investment fees and investment tax). This assumption is consistent with the Trustee's current investment strategy having regard to expected returns in the medium-term under Willis Towers Watson's investment model.

Salary Inflation

The assumed rate of salary inflation was 3.0% p.a. at the last valuation. The average rate of salary growth for members who were present at both the last and current valuation dates was 2.4% p.a. The actual increase in salary growth was 0.6% p.a. lower than the assumed rate. This has reduced the growth in accrued liabilities of the Energy Super DBF, which has had a positive effect on the financial position.

At this valuation we have retained the assumption of 3% p.a. for salary inflation.

Over the long term, it is the "gap" between the investment return (net of tax) and salary inflation assumption that is important when valuing member's liabilities. In this valuation we have retained the "gap" of 1.5% p.a. used in the previous valuation. Over the review period the actual "gap" was 2.5% p.a. which has had a positive impact on the financial position.

Rates at which Members Leave Service

We note that Energy Super DBF has experienced total attrition of 6% p.a. over the two years to 1 July 2021.

For this valuation we have not changed the turnover assumptions used at the previous valuation.

Insurance Premiums

The projected cost of insurance premiums are included in our valuation and the estimate of the long term cost of benefits. The cost of insurance premiums are modelled based on the projected insurance coverage and prevailing premium rates in the latest insurance policy.

New Members

The Energy Super DBF is closed to new entrants.

Summary of Valuation Assumptions

A summary of our valuation assumptions is set out in Appendix E of this report.

Section 5: Insurance Arrangements

Adequacy of Insurance

LGIAsuper currently has death, total and permanent disablement (TPD) and income protection insurance in respect of the Energy Super DBF in place with OnePath.

The insurance coverage within the Energy Super DBF is considered adequate if the net assets are sufficient to cover the Death and TPD benefits after any insured components have been allowed for.

The following table is based on the information provided to us and shows the adequacy of the insurance cover as at 1 July 2021:

	Death \$M	TPD \$M
Lump Sum Death and TPD Benefits (A)	1,250.8	1,249.7
Less Aggregate Group Life Insurance (B)	258.3	257.2
Less Accumulation component of benefit (C)	109.5	109.5
Exposure (A – B – C)	883.1	883.1
Net Assets (excluding assets in respect of Pensioners)	1,223.1	1,223.1

For the Energy Super DBF as at 1 July 2021, the net assets are sufficient to meet the uninsured portion of the death and TPD benefits.

For temporary disablement income benefits, the benefit provisions are entirely matched by the insurance cover. Accordingly, any such claims will have no immediate financial impact on the Fund.

Note that the Fund ceased self-insurance from 1 November 2009. There is a legacy self-insurance reserve of approximately \$3 million to cover any future claims from the self-insurance period

On this basis the insurance coverage is considered to be adequate at the valuation date.

Section 6: Solvency and Funding Status Measures

There are several methods used to assess the current financial situation (i.e. funding status measures) of a defined benefit arrangement. These measures are dealt with below.

Vested Benefits

Under SPS 160, a fund (or a section of a fund) is in a “*satisfactory*” financial position if the assets cover the corresponding Vested Benefit entitlements of members.

The Vested Benefits represent the benefits payable on the review date if all members voluntarily resigned (if under 55) or retired (if over 55). The following table shows the progression of the Vested Benefits Index for the Energy Super DBF over the review period.

	Last Valuation \$M	This Valuation \$M
Net Assets (a)	1,217.9	1,223.1
Vested Benefits* (b)	887.9	883.4
Vested Benefits Index (a)/(b)	137.2%	138.5%

As at 1 July 2021, the net assets exceeded the Vested Benefits and so the Energy Super DBF was in a satisfactory financial position. The ratio of the net assets to the Vested Benefits was 138.5%. At the previous valuation, this ratio was 137.2%. The ratio has improved mainly due to the favourable financial experience over the inter valuation period, with investment returns being greater than expected and salary increases being less than expected as outlined in Section 4.

Actuarial Value of Accrued Benefits

Another indication of the funding status is given by the ratio of the net assets to the Actuarial Value of Accrued Benefits (AVAB). This is called the Actuarial Value of Accrued Benefits Index (AVABI).

AVAB represents the value in today’s dollars of future benefits based on membership completed to the review date, allowing for future salary increases, investment earnings and expected incidence of payment. “*Accrued Benefits*” has the meaning given in Regulation 9.27 of the SIS Regulations.

Different superannuation funds can be expected to have different Actuarial Value of Accrued Benefits Ratios depending on the age and membership history of the members. A fully secured position is represented by a ratio of 100.0%. At this level, with the DBF being closed to new entrants and if no further benefits were allowed to accrue to current members, assets would be sufficient to meet all future benefit payments if the actuarial assumptions are borne out in practice.

The following table shows the progression of the Actuarial Value of Accrued Benefits Index over the review period.

	Last Valuation \$M	This Valuation \$M
Net Assets (a)	1,217.9	1,223.1
Actuarial Value of Accrued Benefits* (b)	862.2	845.0
Actuarial Value of Accrued Benefits Index (a)/(b)	141.3%	144.7%

As at 1 July 2021, the net assets exceeded the Actuarial Value of Accrued Benefits. AVABI has increased from 141.3% to 144.7% over the valuation period and this can be mainly attributed to the favourable financial experience over this period as outlined in Section 4.

Minimum Benefits

Under SPS 160, a fund (or section of a fund) is “solvent” if the net assets exceed the Minimum Requisite Benefits (MRB) of members, where the MRB is the portion of the benefit meeting the Superannuation Guarantee obligations as defined in LGIAsuper’s Benefit Certificate.

The following table shows the progression of the Minimum Benefits Index for the Energy Super DBF over the review period.

	Last Valuation \$M	This Valuation \$M
Net Assets (a)	1,217.9	1,223.1
Minimum Benefits (b)	687.6	700.9
Minimum Benefits Index (a)/(b)	177.1%	174.5%

As at 1 July 2021, the net assets exceeded the Minimum Benefits and so the Energy Super DBF was “solvent”. The Minimum Benefits Index has decreased slightly from 177.1% to 174.5% over the valuation period.

Shortfall Limit

The Trustee has set the Shortfall Limit for the Energy Super DBF as 97.0%. The shortfall limit is defined in paragraph 10 of SPS 160 as:

“... the extent to which an RSE licensee considers that a fund can be in an unsatisfactory financial position with the RSE licensee still being able to reasonably expect that, because of corrections to temporary negative market fluctuations in the value of fund assets, the fund can be restored to a satisfactory financial position within one year.”

Should the Vested Benefits Index breach the Shortfall Limit, additional interim Actuarial investigations will be required with rectification plans to be put in place to address the unsatisfactory financial position.

We have reviewed this Shortfall Limits as part of this actuarial investigation and consider that the Shortfall Limit remains appropriate.

Benefits payable on Retrenchment

A specific retrenchment benefit is not defined in the Trust Deed for Energy Super DBF members. The benefit payable on retrenchment is the member's Vested Benefit. Members' Vested Benefits are 138.5% covered by net assets at the valuation date.

Benefits payable on Termination

The financing objective has been set on the basis that members' reasonable expectations on termination would be to receive their Vested Benefit entitlement.

Section 7: Valuation Contribution Results

It should be emphasised that the funding measures shown in Section 6 relate to the current position at the review date. A valuation which projects the benefits of the DBF is required to assess the adequacy of current contribution rates to provide defined benefits in the future. The results of the valuation are summarised in this Section.

Long term cost of future service benefits

We have calculated the present value of all expected benefits payable in respect of future membership after the valuation date ("future service benefits"). After allowing for the value of future member contributions, we then calculate the required employer contribution rate (inclusive of expenses, insurance premiums and contributions tax) to meet these future service benefits, as shown in the table below:

		\$000
	Future Service Benefit Liabilities	200,258
<i>Less</i>	Value of future member contributions	55,850
	Benefit Liability to be funded from future employer contributions	144,408
	Present Value of future salaries	1,116,999
	Future employer contribution rate calculated (before tax)	12.9%
<i>Plus</i>	Allowance for 15% contributions tax	2.3%
<i>Plus</i>	Allowance for insurance costs	1.5%
	Total Employer Contribution Rate calculated	16.7% of salary

Adjustment for financial position at 1 July 2021

The financial position of the Energy Super DBF has strengthened over the valuation period with the coverage of vested benefits increasing from 137.2% at the last valuation to 138.5% at this valuation. The strong financial position at 1 July 2021 means it is possible for a continuation of the existing contribution holiday arrangements.

As the net assets of the Energy Super DBF of \$1,223.1 million exceed the actuarial value of past service benefits of \$845.0 million by \$378.1 million at 1 July 2021, this past service surplus is more than sufficient to meet the future contributions expected to be required as shown in the table above. There is therefore scope to extend the current contribution holiday on this basis, subject to any industrial agreements being met.

Projection of Vested Benefits coverage for Energy Super DBF

We have tested the impact of continuing the existing contribution holiday arrangements, by projecting the cash flows and the build-up of the assets over the next three years, and comparing the assets to the projected levels of the Vested Benefits within the Energy Super DBF.

Projection Date	Energy Super DBF Assets \$million	Vested Benefits \$million	VBI %
1 July 2021	1,223.1	883.4	138.5%
1 July 2022	1,188.6	844.6	140.7%
1 July 2023	1,152.6	813.5	141.7%
1 July 2024	1,116.7	778.0	143.5%

The projection shows a further increase in the Vested Benefits Index to 143.5% at 1 July 2024 if future experience of Energy Super DBF is in line with our assumptions.

The financial experience over the next 3 years may differ from the valuation assumptions we have adopted and we have considered the sensitivity of these projections further in Section 8 following.

Recommended Contribution Rates – Energy Super DBF

In the absence of any special circumstances and subject to satisfying any industrial agreements, we recommend that from 1 July 2021 each Energy Super DBF employer continues the existing contribution holiday in respect of Defined Benefit members.

Recommended Future Review of Financial Status

The financial status of each DBF is sensitive to actual financial experience (principally, investment returns and salary increases) and membership movements. We therefore recommend that a check is placed on the Vested Benefits Index at least at each annual review date, and more frequently if required, in order to monitor the ongoing coverage of vested benefits. The next actuarial valuation is due at 1 July 2024.

Section 8: Sensitivity Analysis and Material Risks

Sensitivity Analysis

The “gap” adopted in this valuation between the investment return (net of administration and investment fees and investment tax) and salary inflation assumptions is 1.5% p.a. Other assumptions could be used and the table below shows the impact of varying the “gap” between these assumptions on the Energy Super DBF’s financial position and the contribution rate calculated to provide future service benefits under the Attained Age funding method. No changes have been made to the demographic assumptions adopted for this valuation in the scenarios below.

	This Valuation Basis	Scenario 1 +1%	Scenario 2 -1%
The “gap” between net investment return and salary inflation assumptions*	1.5% p.a.	2.5% p.a.	0.5% p.a.
Actuarial Value of Accrued Benefits Index	144.7%	153.3%	135.9%
Attained Age Employer Contribution Rate to provide future service benefits	16.7%	15.3%	18.0%

* The results shown above vary the discount rate by 1% p.a.

It should be noted that the variations selected in the sensitivity analysis above do not indicate upper or lower bounds of all possible outcomes. Further analysis can be carried out if required.

Material Risks

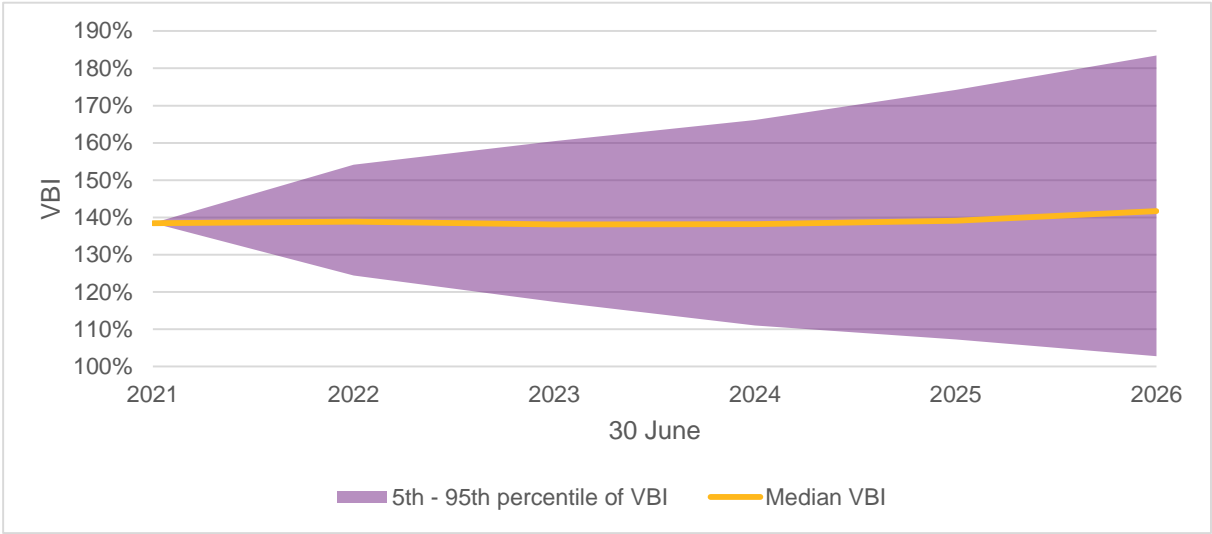
Salary Inflation

For this valuation we have adopted a salary inflation assumption of 3.0% p.a. However if actual salary increases are greater than this, with all other actuarial assumptions borne out, then the funding position (Vested Benefits Index) will reduce which may then affect future funding requirements. Further analysis can be carried out if required.

Investment Returns

For this valuation we have adopted an investment return assumption (net of tax and investment management expenses) of 4.5% p.a. However, if actual investment returns are less than this, with all other actuarial assumptions borne out, then the funding position (Vested Benefits Index) will reduce which may then affect future funding requirements.

For example, the following graph highlights the sensitivity of the Energy Super DBF funding position (Vested Benefits Index) to different investment returns over the next five years. The purple area shows the variability of VBI for returns between the 5th and 95th percentile of our modelled returns.



Appendix A: Summary of Benefits

A.1 Energy Super DBF – Summary of benefits as at 1 July 2021

Membership

The Energy Super DBF is closed to new members.

Member Contributions

Members contribute an amount equal to 5% of the Member's Salary (or 5.9% on a salary sacrifice basis). Such contributions are credited to the Member Basic Account.

Normal Retirement Age

Normal retirement is at any time from age 65 to 70.

Early Retirement Age

Early retirement is available from age 55.

Final Average Salary

- The average of salary over the 12 months immediately prior to exit for all DB members except NRG Gladstone members.
- The average of salary over the 24 months immediately prior to exit for NRG Gladstone members.

Normal Retirement Benefit

The benefit payable on Retirement is the greater of:

- a) 2.5 times the Member Basic Account immediately before the member attained age 55*; and
- b) 19.5% of Final Average Salary for each year of Fund Membership (calculated in years and days).

* This is the Member Basic Account as at age 55, with no further contributions or investment earnings after age 55. This limitation does not apply to NRG Gladstone members

Death / Total and Permanent Disability Benefit

The Death/TPD Benefit for members less than age 60 is equal to the retirement benefit multiple as at age 60 times Projected Final Average Salary, subject to a minimum of 2.5 times the Member Basic Account (limited as for the retirement benefit if over age 55).

For NRG Gladstone members, the minimum benefit on death and TPD is calculated as 2.5 times the Member Basic Account at the date of exit with no limitation.

The Death/TPD Benefit for members over age 60 is equal to the retirement benefit.

Temporary Disablement Income Benefit

A monthly income benefit equals to 80% of member's monthly salary, ceasing at the earlier of:

- two years; and
- reaching age 65.

Resignation, Retrenchment or Serious Ill Health Benefit

The benefit payable is the greater of:

- a) 2.5 times the Member Basic Account; and
- b) 19.5% of Final Average Salary for each year of completed Fund Membership (calculated in years and days) times a discount factor

Where the discount factor is $(1 - 2\% \times [55 - \text{current age}])$ with a minimum of 70%. The period from the current age to 55 is calculated in years and days.

Superannuation Guarantee Minimum Benefit

Benefits on leaving service for any reason are subject to a minimum Superannuation Guarantee benefit described in the Fund's Benefit Certificate.

Additional Accounts

The total additional accounts are also payable on all forms of exit. However only the Family Law Spouse and Surcharge Offset Accounts are considered defined benefit accounts and included in the figures shown in this report.

Appendix B: Details of Membership

Membership at valuation dates

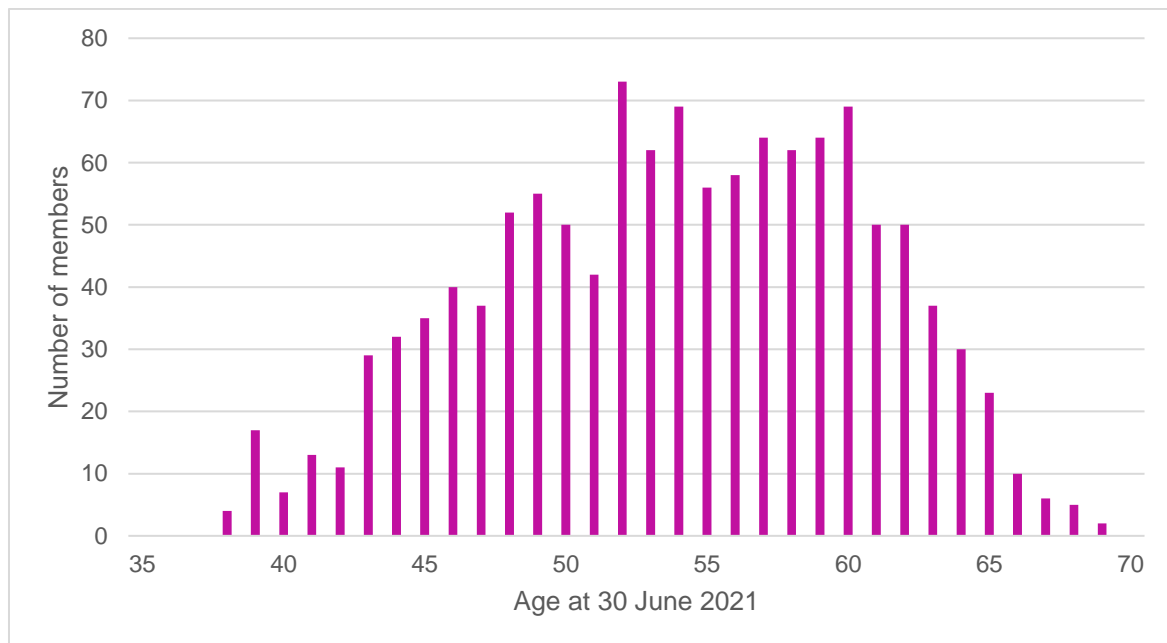
Membership as at:	Number of Members	Total Salaries	Average Salary	Average Age
1 July 2021	1,214	\$164.5m	\$136,462	54.4
1 July 2019	1,384	\$179.6m	\$129,793	53.3

Approaching Retirements

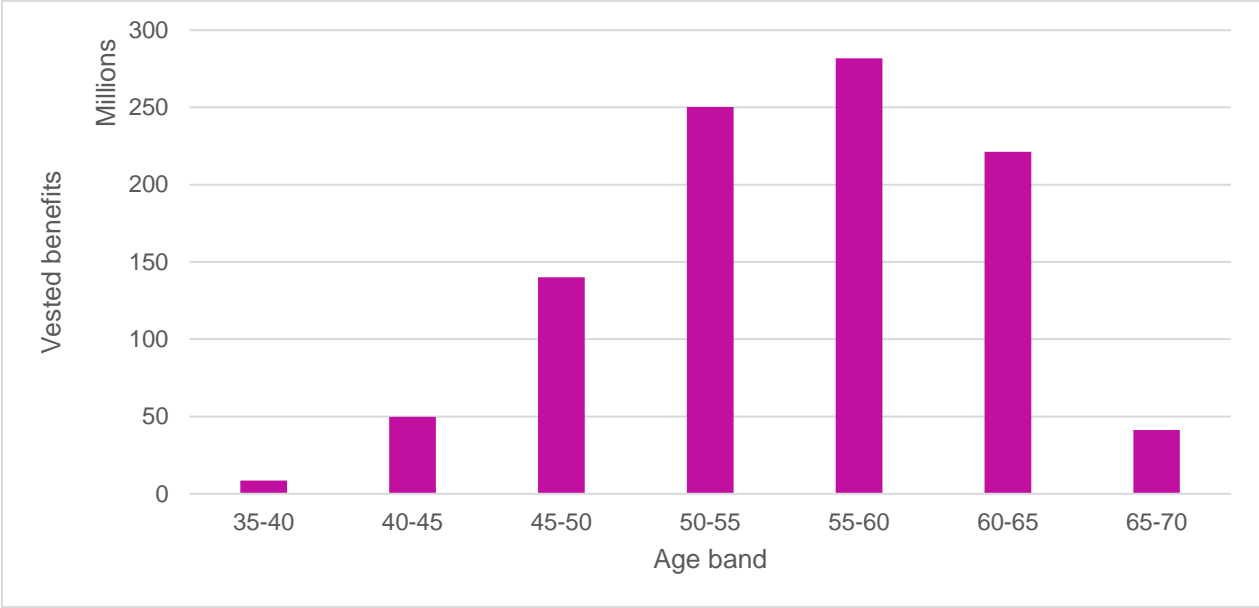
In the next three years, 13 members of Energy Super DBF are expected to reach their Normal Retirement Date. The total of their vested benefits at 1 July 2021 is \$12.8m.

As at 1 July 2021, there are no Defined Benefit members of Energy Super DBF who have passed their Normal Retirement Date (assumed to be 70 years old).

Age Distribution of Defined Benefit Membership



Distribution of Vested Benefits



Appendix C: Consolidated Revenue Accounts

Consolidated Revenue Accounts for the period from 1 July 2019 to 1 July 2021 for Energy DBF

\$000	Total	Powerlink	CS Energy	Stanwell	NRG Gladstone	Energy Qld	CleanCo
Net Assets at 1 July 2019	1,220,350	68,666	77,526	73,157	44,146	956,730	0
Employer Contributions	24,964	1,102	1,104	1,110	608	20,652	389
Member Contributions	3,050	86	51	157	64	2,687	5
Net Transfers between employers	(1,283)	2,343	(1,441)	(7,748)	0	(3,323)	8,886
Investment returns (net of investment tax)	125,029	7,686	8,285	7,701	3,721	96,585	1,041
Benefit payments	(141,024)	(5,281)	(10,970)	(5,514)	(7,061)	(112,198)	0
Repatriation of surplus to employer / or used to fund accumulation contributions	(1,168)	(1,159)	0	0	0	71	0
Insurance costs	(3,407)	(202)	(198)	(219)	(52)	(2,718)	(16)
Contribution tax	(3,425)	5	(155)	(159)	(88)	(2,978)	(50)
Net Assets at 1 July 2021	1,223,087	73,245	74,202	68,485	41,339	955,508	10,254

In addition to the Employer breakdown of assets shown above there is a further \$54,000 of assets held in the Energy Super DBF asset pool at 1 July 2021 attributable to a former employer group IFAA who no longer have any employee members within the Energy Super DBF.

Appendix D: Valuation results by employer group

Long term cost of future service benefits

The following table provides a breakdown of the long term cost of benefits shown in Section 7 for each of the employer groups within the Energy Super DBF.

	Total	Powerlink	CS Energy	Stanwell	NRG Gladstone	Energy Qld	CleanCo
Future Service Benefit Liabilities (\$000)	200,258	12,518	10,652	10,623	4,116	160,499	2,410
<i>Less</i> Value of future member contributions (\$000)	55,850	3,451	2,931	2,753	1,215	44,837	664
Benefit Liability to be funded from future employer contributions (\$000)	144,408	9,067	7,721	7,310	2,901	115,662	1,747
Present Value of future salaries (\$000)	1,116,999	69,018	58,612	55,057	24,304	896,732	13,276
Future employer contribution rate calculated (before tax)	12.9%	13.1%	13.2%	13.3%	11.9%	12.9%	13.2%
<i>Plus</i> Allowance for 15% contributions tax	2.3%	2.3%	2.3%	2.3%	2.1%	2.3%	2.3%
<i>Plus</i> Allowance for insurance costs	1.5%	1.5%	1.4%	1.2%	1.3%	1.5%	1.5%
Total Employer Contribution Rate calculated as % of salary	16.7%	16.9%	16.9%	16.8%	15.3%	16.7%	17.0%

Projection of Vested Benefits coverage by employer for Energy Super DBF

The following table provides the projected Vested Benefit Index for each employer group within the Energy Super DBF. The projections reflect the recommended continuation of the current contribution holiday for each of the employer groups.

Projection Date	Total	Powerlink	CS Energy	Stanwell	NRG Gladstone	Energy Qld	CleanCo
1 July 2021	138.5%	154.7%	149.9%	130.8%	153.5%	136.8%	119.6%
1 July 2022	140.7%	157.0%	152.8%	130.9%	157.8%	139.2%	117.6%
1 July 2023	141.7%	158.6%	155.7%	131.9%	163.7%	139.8%	114.9%
1 July 2024	143.5%	160.3%	159.0%	133.8%	172.8%	141.5%	113.0%

Appendix E: Valuation Method and Assumptions

Valuation Method

The Attained Age Funding Method has been adopted, having regard also to the projected coverage of vested benefits. Further details are set out in Section 4 of this report.

Asset Value

Market value taken from the audited financial statements and DBF breakdown data at the valuation date.

Investment Returns

4.5% p.a. compound (net of investment and administration expenses and taxes)

Inflationary Salary Increases

3% p.a. compound

Promotional Salary Increases

Nil

Rates of Mortality and Total and Permanent Disability (TPD)

Examples of rates at which members leave the Energy Super DBF per year per 10,000 members:

Age Next Birthday	Death	TPD
35	4	0
40	9	4
45	14	8
50	24	18
55	40	39
60	68	83

Rates of Early Retirement

The number of members reaching a given age who are expected to retire are as follows:

Age Next Birthday	Number per year per 10,000 members
55	1,000
56	500
57	500
58	500
59	500
60	1,500
61	2,500
62	2,500
63	3,500
64	3,500
65	3,500
66	3,500
67	3,500
68	3,500
69	3,500
70	10,000

Rates of Leaving Service

Age Next Birthday	Number per year per 10,000 members
35	470
40	380
45	290
50	170
55	0

Rates of Retrenchment

A retrenchment rate of nil per 10,000 members has been assumed.

Future Expense Allowance

Investment expenses and administration expenses are allowed for in the investment returns shown above which are assumed to be net of investment and administration expenses.

Premium rates

Premium rates for both DBF's are assumed to be paid in line with the premium rates outlined in the most recent policy schedule dated effective 1 July 2020. A sample of the premium rates for Death and Total and Permanent Disablement cover are shown in the table below.

Age	Premium rate per \$1,000 of sum insured \$
35	1.229
40	1.740
45	2.904
50	5.041
55	9.078

New Entrants

No allowance for new entrants.

Taxes

Tax on investment income is allowed for in the Investment Returns shown above.

Tax on contributions has been allowed for as 15% of Company contributions reduced by allowable deductions (administration and insurance costs). No allowance has been made for GST or Reduced Input Tax Credits.

Surcharge Tax and Excess Contributions Tax

No allowance has been made for the Surcharge Tax and Excess Contributions Tax as it is assumed the Trustee will offset any tax payable against the benefits of the relevant member, if the member does not reimburse LGIAsuper for the tax payable.

Appendix F: Actuarial Statements required under SPS 160 for Energy Super DBF

The following statements are made for the Energy Super Defined Benefit Fund (DBF) which is part of LGIAsuper in response to Prudential Standard SPS 160:

1. These statements relate to the Energy Super DBF as at 1 July 2021.
2. The value of the assets at 1 July 2021 used to assess the long term employer contribution rates to the Energy Super DBF was \$1,233.1 million based on audited financial statements. This asset value excludes any amount held to meet the Operational Risk Financial Requirement.
3. It is my opinion that the value of the Energy Super DBF assets in point 2 are sufficient to meet the value of the Energy Super DBF liabilities in respect of Accrued Benefits at the review date. These liabilities are 144.7% covered while vested benefits are 138.5% covered.
4. The assumptions and valuation methods used to determine the Accrued Benefit liabilities shown in point 3 are considered appropriate for this purpose.
5. In the absence of any special circumstances and subject to satisfying any industrial agreements, it is recommended that from 1 July 2021 each Energy Super DBF employer continues the existing contribution holiday in respect of Defined Benefit members.
6. Within the meaning of SIS Regulation 9.03, I consider that the financial position of the Energy Super DBF is satisfactory at 1 July 2021 and, provided employer contributions are made at the recommended rates above and the valuation assumptions adopted are borne out in practice, the Energy Super DBF is likely to remain in a satisfactory financial position over the three years following 1 July 2021.
7. The current Shortfall Limit of 97% for the Energy Super DBF is considered to be suitable.
8. As at 1 July 2021, the Energy Super DBF assets were sufficient to cover the corresponding Minimum Benefits of \$700.9 million by 174.5%.
9. All Funding and Solvency Certificates that were required or were material during the period of the investigation have been obtained.

10. The projected likely future financial position of the Energy Super DBF during the three years following the valuation date and based on my best estimate assumptions and recommended contribution rates is as follows:

Projection Date	Energy Super DBF Assets \$millions	Vested Benefits \$millions	VBI %
1 July 2021	1,223.1	883.4	138.5%
1 July 2022	1,188.6	844.6	140.7%
1 July 2023	1,152.6	813.5	141.7%
1 July 2024	1,116.7	778.0	143.5%

11. I consider that an Actuary is likely to be able to certify the solvency position of the Energy Super DBF in any Funding and Solvency Certificate that may be required under the Superannuation Industry (Supervision) Regulations during the three year period commencing from 1 July 2021 based on the current level of Superannuation Guarantee and increases from 10.0% to 12.0% over the period to 1 July 2025.



Nick Wilkinson
Fellow of the Institute of Actuaries of Australia

Review: NW/LC

7 December 2021

Towers Watson Australia Pty Ltd
Level 16, 123 Pitt Street
Sydney NSW 2000
Australia
T +61 2 9285 4000
ABN 45 002 415 349 AFSL 229921