## I.B.E.W. Local Union No. 237 Pension Plan

Exhibit 6.03
Actuarial Assumptions Used for Projections

This Exhibit details the information on actuarial assumptions and methods that, pursuant to Section 6.03 of Revenue Procedure 2017-43, must be described in an application for approval of a proposed benefit suspension. The three parts of this Exhibit correspond to the subsections of Section 6.03 of Revenue Procedure 2017-43.

## Part 1 - Actuarial assumptions and methods used for projections.

Provided is information regarding specific actuarial assumptions (per Revenue Procedure 2017-43) used in the cash flow projections included in the application, with the exception of the projections included in Exhibit 3.01 and Exhibit 7.10. The differences in the assumptions used for Exhibit 3.01 and Exhibit 7.10 are addressed in Part 3 of this Exhibit.

## Investment returns

- Net investment return for deterministic projections:
- Assumed investment return of $12.52 \%$ for the 2017 calendar year
- Assumed investment return of $3.68 \%$ for the 2018 calendar year
- 6.30\% per year during calendar years 2019-2027 and 7.30\% per year during calendar years 2028 and later
- Assumptions used for stochastic projections (if applicable): Not applicable


## Mortality assumptions

- Healthy Lives: Society of Actuaries (SOA) baseline 2006 Headcount-weighted table with Blue Collar adjustment, gender distinct, with separate rates for pre-commencement and postcommencement. Mortality improvement: MP-2017 projection scale beginning in 2006.
- Disabled Lives: SOA baseline 2006 Headcount-weighted disabled retiree mortality, gender distinct. Mortality improvement: MP-2017 projection scale beginning in 2006.


## Other demographic assumptions

- The complete list of disability, withdrawal, and retirement decrement rates is included as Exhibit 6.03-1


## Assumptions regarding form and commencement age of benefits

- Form of payment election assumptions:
- For active and terminated vested participants at retirement:
- $45 \%$ of all participants elect the straight life annuity
- $40 \%$ of all participants elect the $50 \%$ joint and survivor annuity
- $5 \%$ of all participants elect the $75 \%$ joint and survivor annuity
- $10 \%$ of all participants elect the $100 \%$ joint and survivor annuity
- For active and terminated vested participants at disablement:
- $50 \%$ of all participants elect the straight life annuity
- $30 \%$ of all participants elect the $50 \%$ joint and survivor annuity
- $20 \%$ of all participants elect the $100 \%$ joint and survivor annuity
- Assumptions regarding the probability of benefit commencement by age for participants who have terminated with deferred benefits or who are assumed to terminate with deferred benefits in the future are included in Exhibit 6.03-1.
- Assumptions regarding the probability of benefit commencement by age for participants who have become disabled or who are assumed to become disabled in the future are included in Exhibit 6.03-1.


## New entrant profile

- The following is a description of the composition of the new hire profile, including the weights applicable to each assumed age of entry:
- The new hire profile is comprised of the 66 participants who were either first reported as plan participants or reported as participants returning to work during plan years 20092018, grouped down to 11 records by accrued benefit, age and sex, weighted as follows:

| Age | Accrued Benefit $=0$ |  | Accrued Benefit > 0 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Male | Female |
| >20 | 0 | 1 | 0 | 0 |
| 20-24 | 51 | 0 | 0 | 0 |
| 25-29 | 3 | 0 | 0 | 0 |
| 30-34 | 8 | 0 | 0 | 0 |
| 35-39 | 0 | 0 | 1 | 0 |
| 40-44 | 2 | 0 | 0 | 0 |
| 45+ | 0 | 0 | 0 | 0 |

## Assumptions regarding missing or incomplete data

- Assumption regarding terminated vested participants beyond normal retirement age who, because they have not commenced receiving benefit payments, could be considered missing: None. All such participants are included for valuation and cash flow projection purposes.
- Assumptions to fill in other missing data:
- Spouses of active male/female participants assumed to be 3 years younger/older than the participant.
- There are no other missing or incomplete data that would be considered material.


## Contribution rates

- An effective hourly contribution rate, reflecting non-reciprocated and net-reciprocated hours, of $\$ 13.25$ per hour according to the CBA and rehabilitation plan in place. The Trustees have indicated that they will, upon approval of the MPRA Application and affirmative vote by the membership, amend the Rehabilitation Plan to include a $\$ 0.25$ per year contribution increase for each of 2020 through 2024. The resulting 2024 contribution rate of $\$ 14.50$ is assumed to continue thereafter without further increase. The tentative increases are used for projection purposes.


## Contribution base units

- Contribution base units for projection purposes are equal to hours worked in covered employment, including both non-reciprocated and net reciprocated hours.
- For purposes of calculating future Normal Costs, the assumption regarding number of hours associated with each active participant is the average of hours for the three years prior to the valuation date; however, only years for which the participant was active in the plan are used in the averaging. Each active participant's average number of contribution base units is then adjusted to reflect the total expected number of contribution base units for the plan year versus the number of contribution base units reported for the given year.
- For purposes of calculating future employer contributions, it is assumed that 262,000 contribution base units (hours) will be worked for the current and all future plan years.


## Withdrawal liability payments

- There are no current and no assumed future withdrawal liability payments.


## Administrative expenses

- Administrative expenses, expressed as of the beginning of the year, are assumed to be prior year non-investment related expenses, and increasing by $2.5 \%$ for inflation each year thereafter. It is also expected that an additional $\$ 300,000$ in 2018 and $\$ 150,000$ in 2019 will be incurred. Administrative expenses are expected to return to the inflation adjusted 2017 amounts.


## Projection methodology

- A description of any approximation or data grouping techniques that were used: Grouping was used on the new entrants file as indicated above. No other approximation or grouping techniques were used.
- A description of any changes to the cash flow projections that would normally be provided by the actuarial software, including both changes to the programming that affect the results generated by the software and modifications to the results generated by the software: None


## Part 2 - Supporting documentation for selection of certain assumptions

Investment Returns

- The assumed investment return of $6.30 \%$ over the short-term (2018 through 2027) is based upon advice of the Fund's investment consultant reflecting the asset allocation of the Fund. Details on the expected allocation and 10 year return expectation are attached as Exhibit 6.03-2.
- This rate falls within the range of reasonable long-term assumptions provided in a national survey of investment consultants.
- The rate is also close to an assumption developed using current risk free rates and a building block approach consistent with Actuarial Standards of Practice.
- The assumed investment return of $6.80 \%$ over the long-term ( 2028 and later) is based upon advice of the Fund's investment consultant reflecting the asset allocation of the Fund. Details on the expected allocation and 20 year return expectation are attached as Exhibit 6.03-2.
- This rate falls within the range of reasonable long-term assumptions provided in a national survey of investment consultants.
- The rate is also close to an assumption developed using current risk free rates and a building block approach consistent with Actuarial Standards of Practice.
- The target portfolio is comprised of the following, as detailed in the Fund's Investment Policy Statement:

|  | set Class | Allocation |
| :---: | :---: | :---: |
| $\bigcirc$ | US Equity - Large Cap | 35.8\% |
| $\bigcirc$ | US Equity - Small/Mid Cap | 4.0\% |
| $\bigcirc$ | Non-US Equity - Developed | 9.1\% |
| $\bigcirc$ | Non-US Equity - Emerging | 2.1\% |
| $\bigcirc$ | US Corporate Bonds - Core | 13.5\% |
| $\bigcirc$ | US Corporate Bonds - Long Duration | 2.8\% |
| $\bigcirc$ | US Corporate Bonds - High Yield | 2.8\% |
| $\bigcirc$ | Non-US Debt - Developed | 0.0\% |
| $\bigcirc$ | Non-US Debt - Emerging | 2.9\% |
| $\bigcirc$ | US Treasuries (Cash Equiv.) | 0.0\% |
| $\bigcirc$ | TIPS (Inflation Protected) | 0.0\% |
| $\bigcirc$ | Real Estate | 12.0\% |
| $\bigcirc$ | Hedge Funds | 15.0\% |
| $\bigcirc$ | Commodities | 0.0\% |
| $\bigcirc$ | Infrastructure | 0.0\% |
| $\bigcirc$ | Private Equity | 0.0\% |
| $\bigcirc$ | Total | 100.0\% |

- The target portfolio is approximately the same allocation as the current portfolio of Fund assets.
- The mix of assets is expected to remain the same over time. Minor variances that will occur over time but are assumed to rebalance regularly to maintain allocations close to the target allocation.


## Demographic experience

- Provide any study of the plan's demographic experience performed over the last ten years.
- Attached as Exhibit 6.03-3 are the results of the retirement rates experience study.
- Attached as Exhibit 6.03-3 are the results of the withdrawal rates experience study.
- Attached as Exhibit 6.03-3 are the results of the disability rates experience study.
- Attached as Exhibit 6.03-4 are the results of the form of payment experience study.
- Provide any liability gain or loss analysis performed over the last ten years. If the gain or loss analysis is by source, provide the results by source.
- No liability gain or loss analysis by demographic assumption has been performed. Cowden Associates, Inc. has been retained as the actuary starting with the work for the 2017 Valuation.
- The percentage of the plan population that is married: According to data provided by the plan administrator, of the participants reported with a marriage status, $65 \%$ were married and $35 \%$ were either single or divorced.
- Distribution of each optional form of benefit selected at retirement and disablement for the last five years: Please see Exhibit 6.03-4
- Retirement rates by age for benefit commencements during the last 5 years, separately for active and terminated vested participants: Please see Exhibit 6.03-3.


## Mortality assumptions

- The assumed mortality rates used for Healthy Participants are those from the RPH-2014 Blue Collar sex-distinct tables as issued by the Society of Actuaries (available at https://www.soa.org/experience-studies/2014/research-2014-rp/).
- Description of the process that was used to construct the mortality rates based on experience study data and the rationale for selecting that process: See the RP-2014 Mortality Tables Report.
- The assumed mortality improvement rates are those published in the SOA MP-2017 improvement scale. These mortality improvement rates are applied to the mortality rates starting with the 2006 year.


## Contribution base units and employer withdrawals

- For each year starting with the 2009 plan year, Exhibit 6.03-6 provides a table of employers that contributed $5 \%$ or more of the annual contributions to the plan. The exhibit includes the number of contribution base units, the average contribution rate, and the total contribution for each such employer.
- The historical trends experienced by the plan with respect to contribution base units and contribution rates is documented in several sections within the application, including Sections 5.01(II), 5.02(1)(e), 5.02(3), 5.02(4), and 6.04.
- The assumption of 262,000 hours worked (contribution base units) has been developed by reviewing several years of recent plan years of data. Total plan year contributions net of reciprocity was divided by the contribution rate to determine an approximate equivalent number of hours worked within IBEW Local 237's jurisdiction. Trustees have advised that this looks to produce a reasonable expectation of the amount of contributions to the plan during the current and future plan years.
- Contribution rates are assumed to remain constant at the current collectively bargained rate of $\$ 13.25$ effective May 28, 2018. The Trustees have expressed their commitment to amending the Rehabilitation Plan for contribution increases should the Treasury approve this Application and the Union membership vote to approve the suspension. The Trustees have indicated their intent to increase contributions by $\$ 0.25$ effective June 1 in 2020 through 2024. Contribution rates for projections are assumed to increase according to the indicated intent of the Trustees.
- The Plan has not had an employer withdrawal within, at least, any of the last 5 years. Since the Plan is a Construction Industry Plan, we have assumed that there will not be any future withdrawals.


## Take-up rate with respect to selection of benefit/contribution schedules

- Description of the plan's experience for take-up of each benefit/contribution schedule made available to bargaining units under the rehabilitation plan: Not applicable as only one schedule is available to employers.


## Projection methodology

- No Approximation techniques were utilized in any of the projections.
- There were no changes to the cash flow projections that would normally be generated by the actuarial software, including both changes to the programming that affect the results generated by the software and modifications to the results generated by the software.


## Part 3 - Additional disclosures relating to use of different assumptions

- Deterministic projections: See Exhibit 6.03-5 for differences. Assumptions listed in italics correspond with assumptions used in section 3.01 and assumptions not in italics correspond with assumptions used in section 4.02(1)
- Stochastic projections: Not applicable.

Exhibit 6.03-1
Decrement Tables

| Age | Disability Incidence* | Withdrawal Incidence | Retirement Incidence from Active status |  | Retirement Incidence from terminated status |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Service < 5 | Service >=5 | Service < 5 | Service >= 5 |
| 15 | 0.000693 | 0.0435 | - | - | - | - |
| 16 | 0.000693 | 0.0435 | - | - | - | - |
| 17 | 0.000693 | 0.0435 | - | - | - | - |
| 18 | 0.000693 | 0.0435 | - | - | - | - |
| 19 | 0.000700 | 0.0435 | - | - | - | - |
| 20 | 0.000709 | 0.0435 | - | - | - | - |
| 21 | 0.000719 | 0.0435 | - | - | - | - |
| 22 | 0.000731 | 0.0435 | - | - | - | - |
| 23 | 0.000744 | 0.0435 | - | - | - | - |
| 24 | 0.000760 | 0.0435 | - | - | - | - |
| 25 | 0.000779 | 0.0373 | - | - | - | - |
| 26 | 0.000800 | 0.0373 | - | - | - | - |
| 27 | 0.000825 | 0.0373 | - | - | - | - |
| 28 | 0.000853 | 0.0373 | - | - | - | - |
| 29 | 0.000886 | 0.0373 | - | - | - | - |
| 30 | 0.000925 | 0.0531 | - | - | - | - |
| 31 | 0.000970 | 0.0531 | - | - | - | - |
| 32 | 0.001022 | 0.0531 | - | - | - | - |
| 33 | 0.001082 | 0.0531 | - | - | - | - |
| 34 | 0.001152 | 0.0531 | - | - | - | - |
| 35 | 0.001233 | 0.0471 | - | - | - | - |
| 36 | 0.001327 | 0.0471 | - | - | - | - |
| 37 | 0.001437 | 0.0471 | - | - | - | - |
| 38 | 0.001564 | 0.0471 | - | - | - | - |
| 39 | 0.001711 | 0.0471 | - | - | - | - |
| 40 | 0.001882 | 0.0368 | - | - | - | - |
| 41 | 0.002080 | 0.0368 | - | - | - | - |
| 42 | 0.002311 | 0.0368 | - | - | - | - |
| 43 | 0.002578 | 0.0368 | - | - | - | - |
| 44 | 0.002888 | 0.0368 | - | - | - | - |
| 45 | 0.003248 | 0.0442 | - | - | - | - |
| 46 | 0.003665 | 0.0442 | - | - | - | - |
| 47 | 0.004150 | 0.0442 | - | - | - | - |
| 48 | 0.004712 | 0.0442 | - | - | - | - |
| 49 | 0.005365 | 0.0442 | - | - | - | - |
| 50 | 0.006122 | 0.0386 | - | - | - | - |
| 51 | 0.007001 | 0.0386 | - | - | - | - |
| 52 | 0.008021 | 0.0386 | - | - | - | - |
| 53 | 0.009205 | 0.0386 | - | - | - | - |
| 54 | 0.010579 | 0.0386 | - | - | - | - |
| 55 | 0.012173 | - | - | 0.15 | - | 0.25 |
| 56 | 0.014023 | - | - | 0.10 | - | - |
| 57 | 0.016171 | - | - | 0.10 | - | - |
| 58 | 0.018663 | - | - | 0.05 | - | - |
| 59 | 0.021554 | - | - | 0.40 | - | - |
| 60 | 0.024910 | - | - | 0.25 | - | 0.50 |
| 61 | 0.028805 | - | - | 0.30 | - | - |
| 62 | - | - | - | 0.75 | - | 0.25 |
| 63 | - | - | - | 1.00 | - | - |
| 64 |  | - | - | 1.00 | - |  |
| 65 | - | - | 1.00 | 1.00 | 1.00 | 1.00 |

Exhibit 6.03-2
Investment Return Assumption Documentation

## IBEW 237 Pension

Asset and Product Mixes

|  | Policy | Add HIT |
| :---: | :---: | :---: |
| Equity Group Trust | 51.0\% | 51.0\% |
| Total Equity | 51.0\% | 51.0\% |
| Mortgages | 0.0\% | 3.0\% |
| Fixed Income Group Trust | 22.0\% | 19.0\% |
| Total Fixed Income | 22.0\% | 22.0\% |
| Real Estate - Core | 12.0\% | 12.0\% |
| Alternative Group Trust | 15.0\% | 15.0\% |
| Total Alternative | 27.0\% | 27.0\% |
| 10 Year Expected Return (Arithmetic) | 6.8\% | 6.8\% |
| 10 Year Expected Return (Geometric) | 6.3\% | 6.3\% |
| Standard Deviation | 11.1\% | 11.0\% |
| Sharpe Ratio | 0.39 | 0.39 |
| 20 Year Expected Return (Arithmetic) | 7.4\% | 7.4\% |
| 20 Year Expected Return (Geometric) | 6.8\% | 6.8\% |

Experience Review - Decrements

Retirement Experience for Active participants from 2008-2018

| Age | Exposures Count | Actual Experience |  | New Rate |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Count | Observed Rate |  |
| 55 | 53 | 8 | 15\% | 15\% |
| 56 | 41 | 4 | 10\% | 10\% |
| 57 | 35 | 4 | 11\% | 10\% |
| 58 | 27 | 2 | 7\% | 5\% |
| 59 | 21 | 6 | 29\% | 40\% |
| 60 | 13 | 3 | 23\% | 25\% |
| 61 | 7 | 2 | 29\% | 30\% |
| 62 | 4 | 3 | 75\% | 75\% |
| 63 | 1 | 1 | 100\% | 100\% |
| 64 | 0 | 0 | 0\% | 100\% |
| 65 | 0 | 0 | 0\% | 100\% |
| 66 | 0 | 0 | 0\% | 100\% |
| 67 | 0 | 0 | 0\% | 100\% |
| 68 | 0 | 0 | 0\% | 100\% |
| 69 | 0 | 0 | 0\% | 100\% |
| 70+ | 0 | 0 | 0\% | 100\% |

Retirement Experience for Active participants from 2013-2018

| Age | Exposures Count | Actual Experience |  | New Rate |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Count | Observed Rate |  |
| 55 | 29 | 4 | 14\% | 15\% |
| 56 | 23 | 2 | 9\% | 10\% |
| 57 | 21 | 2 | 10\% | 10\% |
| 58 | 16 | 1 | 6\% | 5\% |
| 59 | 12 | 5 | 42\% | 40\% |
| 60 | 10 | 2 | 20\% | 25\% |
| 61 | 5 | 2 | 40\% | 30\% |
| 62 | 3 | 2 | 67\% | 75\% |
| 63 | 1 | 1 | 100\% | 100\% |
| 64 | 0 | 0 | 0\% | 100\% |
| 65 | 0 | 0 | 0\% | 100\% |
| 66 | 0 | 0 | 0\% | 100\% |
| 67 | 0 | 0 | 0\% | 100\% |
| 68 | 0 | 0 | 0\% | 100\% |
| 69 | 0 | 0 | 0\% | 100\% |
| 70+ | 0 | 0 | 0\% | 100\% |

Withdrawal Experience for Active participants from 2008-2018

| Age | Exposures Count | Actual Experience |  | New Rate |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Count | Observed Rate |  |
| <25 | 46 | 2 | 4.35\% | 4.35\% |
| 25-29 | 161 | 6 | 3.73\% | 3.73\% |
| 30-34 | 245 | 13 | 5.31\% | 5.31\% |
| 35-39 | 255 | 12 | 4.71\% | 4.71\% |
| 40-44 | 299 | 11 | 3.68\% | 3.68\% |
| 45-49 | 339 | 15 | 4.42\% | 4.42\% |
| 50-54 | 311 | 12 | 3.86\% | 3.86\% |
| 55-59 | 5 | 0 | 0.00\% | 100\% |
| 60-64 | 4 | 0 | 0.00\% | 100\% |
| 65+ | 2 | 1 | 0.00\% | 100\% |
| <Total> | 1667 | 72 | 0.00\% | 100\% |

Retirement Experience for Active participants from 2014-2018

| Age | Exposures <br> Count | Actual Experience |  | New Rate |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Count | Observed Rate |  |
| 55 | 26 | 4 | 15\% | 15\% |
| 56 | 20 | 1 | 5\% | 10\% |
| 57 | 18 | 2 | 11\% | 10\% |
| 58 | 14 | 1 | 7\% | 5\% |
| 59 | 10 | 4 | 40\% | 40\% |
| 60 | 6 | 1 | 17\% | 25\% |
| 61 | 5 | 2 | 40\% | 30\% |
| 62 | 2 | 2 | 100\% | 75\% |
| 63 | 1 | 1 | 100\% | 100\% |
| 64 | 0 | 0 | 0\% | 100\% |
| 65 | 0 | 0 | 0\% | 100\% |
| 66 | 0 | 0 | 0\% | 100\% |
| 67 | 0 | 0 | 0\% | 100\% |
| 68 | 0 | 0 | 0\% | 100\% |
| 69 | 0 | 0 | 0\% | 100\% |
| 70+ | 0 | 0 | 0\% | 100\% |

Retirement Experience for Terminated participants from 2013-2018

| Age | Exposures Count | Actual Experience |  | New Rate |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Count | Observed Rate |  |
| 55 | 16 | 1 | 6\% | 25\% |
| 56 | 18 | 0 | 0\% | 0\% |
| 57 | 15 | 0 | 0\% | 0\% |
| 58 | 12 | 0 | 0\% | 0\% |
| 59 | 7 | 1 | 14\% | 0\% |
| 60 | 8 | 0 | 0\% | 50\% |
| 61 | 5 | 0 | 0\% | 0\% |
| 62 | 5 | 1 | 20\% | 25\% |
| 63 | 4 | 0 | 0\% | 0\% |
| 64 | 3 | 0 | 0\% | 0\% |
| 65 | 1 | 0 | 0\% | 100\% |
| 66 | 1 | 0 | 0\% | 100\% |
| 67 | 0 | 0 | 0\% | 100\% |
| 68 | 0 | 0 | 0\% | 100\% |
| 69 | 0 | 0 | 0\% | 100\% |
| 70+ | 0 | 0 | 0\% | 100\% |

Disability Experience for Active participants from 2008-2018

| Age | Exposures | Actual Experience |  |
| :---: | :---: | :---: | :---: |
|  | Count | Count | Observed Rate |
| <25 | 0 | 0 | 0.00\% |
| 25-29 | 46 | 0 | 0.00\% |
| 30-34 | 161 | 0 | 0.00\% |
| 35-39 | 245 | 0 | 0.00\% |
| 40-44 | 255 | 0 | 0.00\% |
| 45-49 | 299 | 0 | 0.00\% |
| 50-54 | 339 | 1 | 0.29\% |
| 55-59 | 311 | 2 | 0.64\% |
| 60-64 | 182 | 4 | 0.00\% |
| 65+ | 29 | 0 | 0.00\% |
| <Total> | 2 | 0 | 0.00\% |

Exhibit 6.03-4
Experience Review - Payment Form Election


Level income payment option is considered an accelerated form of payment and is not permitted under §432(f)(2)(A)(i).

Mortality Healthy: Society of Actuaries (SOA) baseline 2006 Headcount-weighted table with Blue Collar adjustment, gender distinct, with separate rates for pre-commencement and post-commencement. Mortality improvement: MP-2017 projection scale beginning in 2006.

Disabled: SOA baseline 2006 Headcount-weighted disabled retiree mortality, gender distinct. Mortality improvement: MP-2017 projection scale beginning in 2006.

Healthy: RP-2014 Combined Healthy Blue Collar Headcount Weighted Mortality Table, with fully generational projection using scale MP-2015

Disabled: RP-2014 Disabled Retiree Headcount Weighted Mortality Table, with fully generational projection using scale MP-2015

Interest Rate Net investment return for deterministic projections:

- Assumed investment return of $12.52 \%$ for the 2017 calendar year
- Assumed investment return of 3.68\% for the 2018 calendar year
- $6.30 \%$ per year during calendar years 2019-2027 and $6.80 \%$ per year during calendar years 2028 and later
7.00\%

| Turnover | Age | $\frac{\text { Rate }}{}$ |
| :--- | :---: | :---: |
|  | $<25$ | $4.35 \%$ |
| $25-29$ | $3.73 \%$ |  |
| $30-34$ | $5.31 \%$ |  |
|  | $35-39$ | $4.71 \%$ |
|  | $40-44$ | $3.68 \%$ |
|  | $45-49$ | $4.42 \%$ |
|  | $50-54$ | $3.86 \%$ |
|  | $55+$ | $100 \%$ |

None

Exhibit 6.03-5
Disclosures relating to use of different Assumptions

Retirement Based on age and service as follows:

|  | If Active |  | If Terminated |  | 3.01 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Service | Service | Service | Service |  |
| Age | $\leq 5$ | $\geq=5$ | $\leq 5$ | $\geq=5$ | Rates |
| 55 | - | 0.15 | - | 0.25 | 0.10 |
| 56 | - | 0.10 | - | - | 0.05 |
| 57 | - | 0.10 | - | - | 0.05 |
| 58 | - | 0.05 | - | - | 0.20 |
| 59 | - | 0.40 | - | - | 0.10 |
| 60 | - | 0.25 | - | 0.50 | 0.75 |
| 61 | - | 0.30 | - | - | 0.25 |
| 62 | - | 0.75 | - | 0.25 | 0.25 |
| 63 | - | 1.00 | - | - | 0.25 |
| 64 | - | 1.00 | - | - | 0.25 |
| 65 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Expenses Administrative expenses, expressed as of the beginning of the year, are assumed to be prior year non-investment related expenses, and increasing by $2.5 \%$ for inflation each year thereafter. It is also expected that an additional $\$ 300,000$ in 2018 and $\$ 150,000$ in 2019 will be incurred. Administrative expenses are expected to return to the inflation adjusted 2017 amounts.

The normal cost is increased by $\$ 110,000$ for non-investment related expenses.

Percent 65\% of the participants are assumed to be married with the female spouse three Married years younger than the male spouse.
$80 \%$ of the participants are assumed to be married with the female spouse three years younger than the male spouse.

Payment Form For active and terminated vested participants at retirement:

## Election

- $45 \%$ of all participants elect the straight life annuity
- $40 \%$ of all participants elect the $50 \%$ joint and survivor annuity
- $5 \%$ of all participants elect the $75 \%$ joint and survivor annuity
- $10 \%$ of all participants elect the $100 \%$ joint and survivor annuity For active and terminated vested participants at disablement:
- $50 \%$ of all participants elect the straight life annuity
- $30 \%$ of all participants elect the $50 \%$ joint and survivor annuity
- $20 \%$ of all participants elect the $100 \%$ joint and survivor annuity $100 \%$ of participants were assumed to elect the straight life annuity

Incomplete None.
Data
Beneficiary date of birth is missing for one participant. The beneficiary is assumed to be three years younger than the participant.

Contribution An effective hourly contribution rate, reflecting non-reciprocated and netRates reciprocated hours, of $\$ 13.25$ per hour according to the CBA and rehabilitation plan in place. The Trustees have indicated that they will, upon approval of the MPRA Application and affirmative vote by the membership, amend the Rehabilitation Plan to include a $\$ 0.25$ per year contribution increase for each of 2020 through 2024. The resulting 2024 contribution rate of $\$ 14.50$ is assumed to continue thereafter without further increase. The tentative increases are used for projection purposes.

An effective hourly contribution rate of $\$ 12.75$ per hour according to the CBA and rehabilitation plan in place.

| Employer | Number of CBUs | Average Contribution Rate | Total |  | Number of CBUs | Average Contribution Rate | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | CBUs | Rate | Contributions | Employer |  |  | Contributions |
| 2009 |  |  |  |  |  |  |  |
| Ferguson Electric | 99,594 | \$8.30 | \$826,630 | 2014 |  |  |  |
| Frey Electric | 41,943 | \$8.30 | \$348,128 | Ferguson Electric | 107,637 | \$11.25 | \$1,210,918 |
| CIR Electric | 32,817 | \$8.30 | \$272,381 | Frey Electric | 63,198 | \$11.25 | \$710,977 |
| Industrial Power and Lighting | 24,048 | \$8.30 | \$199,601 | CIR Electric | 47,781 | \$11.25 | \$537,531 |
|  |  |  |  | Cupertino Electric | 82,751 | \$11.25 | \$930,954 |
| 2010 |  |  |  |  |  |  |  |
| Cupertino Electric | 82,906 | \$9.05 | \$750,296 | 2015 |  |  |  |
| Ferguson Electric | 58,655 | \$9.05 | \$530,829 | Ferguson Electric | 106,240 | \$11.75 | \$1,248,324 |
| Frey Electric | 28,495 | \$9.05 | \$257,878 | Frey Electric | 25,234 | \$11.75 | \$296,503 |
| Weydman Electric | 30,729 | \$9.05 | \$278,093 | CIR Electric | 39,885 | \$11.75 | \$468,654 |
| CIR Electric | 24,413 | \$9.05 | \$220,934 | Cupertino Electric | 15,806 | \$11.75 | \$185,720 |
| O'Connell Electric | 17,534 | \$9.05 | \$158,680 | O'Connell Electric | 15,476 | \$11.75 | \$181,839 |
| 2011 |  |  |  | 2016 |  |  |  |
| Ferguson Electric | 45,634 | \$9.55 | \$435,803 | Ferguson Electric | 83,748 | \$12.25 | \$1,025,911 |
| O'Connell Electric | 35,855 | \$9.55 | \$342,420 | Frey Electric | 31,739 | \$12.25 | \$388,806 |
| Frey Electric | 34,483 | \$9.55 | \$329,316 | CIR Electric | 55,167 | \$12.25 | \$675,801 |
| Weydman Electric | 28,810 | \$9.55 | \$275,137 | Industrial Power \& Lighting | 15,507 | \$12.25 | \$189,963 |
| CIR Electric | 25,594 | \$9.55 | \$244,419 | O'Connell Electric | 18,379 | \$12.25 | \$225,145 |
| Industrial Power \& Lighting | 20,633 | \$9.55 | \$197,047 | The State Group Industrial | 12,708 | \$12.25 | \$155,679 |
| 2012 |  |  |  | 2017 |  |  |  |
| Ferguson Electric | 98,549 | \$10.05 | \$990,415 | Ferguson Electric | 63,479 | \$12.75 | \$809,343 |
| CIR Electric | 38,389 | \$10.05 | \$385,805 | Frey Electric | 26,198 | \$12.75 | \$334,019 |
| Frey Electric | 20,376 | \$10.05 | \$204,777 | CIR Electric | 71,511 | \$12.75 | \$911,769 |
|  |  |  |  | Industrial Power \& Lighting | 13,771 | \$12.75 | \$175,579 |
| 2013 |  |  |  | O'Connell Electric | 14,867 | \$12.75 | \$189,556 |
| Ferguson Electric | 103,529 | \$10.55 | \$1,092,235 | Suburban Electric | 12,086 | \$12.75 | \$154,093 |
| Frey Electric | 77,026 | \$10.55 | \$812,622 |  |  |  |  |
| CIR Electric | 56,953 | \$10.55 | \$600,852 |  |  |  |  |

