

# **RatingsDirect**<sup>®</sup>

# District of Columbia Howard University; Private Coll/Univ - General Obligation

Primary Credit Analyst: Laura A Kuffler-Macdonald, New York (1) 212-438-2519; laura.kuffler.macdonald@spglobal.com

Secondary Contact: Jessica L Wood, Chicago (1) 312-233-7004; jessica.wood@spglobal.com

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# District of Columbia Howard University; Private Coll/Univ - General Obligation

#### **Credit Profile**

### **District of Columbia, District Of Columbia** Howard Univ, District Of Columbia

#### Series 2011A & 2011B

Long Term Rating

**BBB/Negative** 

Affirmed

# Rationale

S&P Global Ratings has affirmed its 'BBB' long-term and underlying rating on the District of Columbia's \$233 million series 2010 and 2011 revenue bonds issued for Howard University. The outlook is negative.

The 'BBB' rating reflects our view of Howard's strong enterprise profile and adequate financial profile with its position as one of the most prestigious African-American institutions with a wide array of program offerings and diverse revenues. However, declining revenues have resulted in significant operating losses in fiscal years 2014 and 2015. Fiscal 2016 ended with a surplus, and results for 2017 indicate another deficit (albeit smaller). Combined, these credit factors lead to a 'bbb' indicative stand-alone credit profile and 'BBB' long-term rating.

The 'BBB' rating reflects our view of Howard's operating challenges, including:

- Howard University Hospital's (HUH) constrained operating environment, with declining admissions, lower operating revenues, and a weak payer mix that depends largely on Medicaid (27% of patient revenues in fiscal 2017);
- Uneven operating performance, with a reported surplus in fiscal 2016 following a \$45 million and \$56 million operating deficit in fiscal years 2014 and 2015, respectively. Fiscal 2016 results included a \$9.5 million operating surplus, significantly improved from the previous two fiscal years; however, fiscal 2017 resulted in an unrestricted \$34 million deficit, excluding one-time revenue of \$33 million; and
- Periodic liquidity stress, typically related to the timing of federal appropriation payments during federal budget continuing resolution cycles, resulting in the need for bank lines for liquidity. However, for fiscal 2017, Howard ended the year with no draws on its bank lines of credit (LOC).

Partially offsetting credit factors, in our view, include the university's:

- Niche as one of two federally chartered, nonmilitary higher education institutions and status as one of the most prestigious historic African-American universities in the U.S., as well as its impressive array of professional programs;
- Substantial and historically stable levels of federal operating support, which, at \$218.4 million in fiscal 2017, was about 25.4% of adjusted operating revenues;
- Overall stable enrollment levels and good demand profile despite a significant decline in freshman enrollment in fall

2016 which rebounded in fall 2017;

- Adequate financial resource ratios for the 'BBB' category. Cash and investments of \$715 million at June 30, 2017, equaled 80% of expenses and 161% of debt; and
- Manageable debt burden, with long-term debt of about 4.2% of 2017 operating expenses.

Howard, founded in 1867, is a comprehensive private university in Washington, D.C. The university offers a broad range of undergraduate, graduate, and professional programs, including law, business, medicine, dentistry, pharmacy, engineering, and architecture. Howard also has a school of divinity. In addition, it owns the teaching hospital, which represented about 29% of consolidated operating revenues in 2017. Howard is one of only two nonmilitary schools in the U.S. that are federally chartered and receive an ongoing direct federal appropriation. As a 1928 congressional act mandated institution, we understand that only an act of Congress can terminate the university's annual appropriation. Howard has a small research presence, largely related to its medical school. For fiscal 2017, it recorded \$41 million of research expenses supported by grant revenues.

## Outlook

The negative outlook reflects our assessment of Howard's and the HUH's consolidated weak operations and lack of consistently stable operations.

#### Downside scenario

We could lower the rating during our two-year outlook period should Howard not maintain its more recent healthy enrollment profile, operating performance or financial resources deteriorate, or the university issue additional debt without an improvement in operating margins and liquidity.

#### Upside scenario

Given the weak operating performance and only adequate balance-sheet metrics, we do not expect to raise the rating over the outlook period. We could revise the outlook to stable should Howard produce consistent improved operating results and surpluses while improving its liquidity position.

### **Enterprise Profile**

#### Industry risk

Industry risk addresses the higher education sector's overall cyclicality and competitive risk and growth by applying various stress scenarios and evaluating barriers to entry, levels and trends of profitability, substitution risk, and growth trends observed in the industry. We believe the higher education sector represents a low credit risk when compared with other industries and sectors.

#### **Economic fundamentals**

In our view, the college has good geographic diversity. About 5% of students are from within the District of Columbia, and remaining come from other states and countries. As such, our assessment of Howard's economic fundamentals is anchored by the US GDP per capita.

#### Market position and demand

In recent years, enrollment has been declining. Enrollment had been largely flat overall for through fall 2011. However, in fall 2012, total headcount declined 5.5% to 10,002 largely due to changes in lending criteria for the federal Parent PLUS loans, which resulted in increased denials. Although many were successfully appealed, enrollment was flat through fall 2015, at a headcount of 10,002. Enrollment in fall 2016 declined 10.4% to 8,966 due to Howard's new strategic emphasis on student quality. The university is focusing on increasing selectivity, raising academic quality, and raising retention. However, for fall 2016, management believed it increased their standards too quickly, resulting in a drop in enrollment. This moderated for fall 2017 and Howard accepted its largest entering undergraduate class, which should help with overall fall 2017 enrollment. Fall 2017 enrollment is an estimated 9,472. A little more than two-thirds of students are undergraduates (68%), with most full-time.

Historically, university admissions have been moderately selective, with 49% of freshman applicants accepted for fall 2015. However, for fall 2016, the acceptance rate declined to 30% as the university sought to increase its selectivity, raise its quality, increase retention, and reduce attrition. This resulted in an entering freshman class of 901 students, compared with 1,676 the prior year. At the same time, Howard aims to continue providing students with limited financial means access to higher education. SAT scores for applicants were 1126 for fall 2015, compared with 1160 for fall 2016, reflecting this strategic emphasis. After altering its admissions policies and financial aid policies, the university is rebuilding based on a higher academic quality. For fall 2017, applications declined and acceptances increased to 41% for a fall freshman class of 2,167, which should help overall enrollment rebound while improving quality. The average SAT scores for freshman for fall 2017 was 1200. We believe that the incoming freshman scores compares favorably with those of peer historically black colleges and universities and is above the national average. Howard historically draws students primarily from Maryland, New York, and New Jersey; the next largest groups come from Georgia, Virginia, and California. Management reports that it competes primarily with the large public institutions in those states, as well as other historically black colleges and universities.

Undergraduate tuition and board was \$38,955 for the 2017-2018 academic year, up 3% higher than the prior year. Management froze tuition for 2013-2014 but in 2014-2015 tuition rose 6%, was again flat in 2015-2016, and increased 3.0% in fiscal year 2017. Although tuition is well below that of other private institutions in the D.C. metropolitan area, a significant number of students receive merit- or need-based aid, and that the university has been shifting more scholarship dollars into need-based aid in recent years. Nearly 57.5% of undergraduates qualify for Federal Pell grants. For fiscal 2017, the tuition discount rate was 40%. Combined with declines in enrollment, this resulted in lower net tuition revenue.

#### Howard University Hospital

The HUH is an acute care and teaching and research facility that provides health care services in the Washington, D.C., area. There are 482 licensed beds, of which 246 are in service. The hospital is the principal clinical teaching site for Howard's colleges of medicine and dentistry. Most of its facilities are in a six-story structure that opened in 1975. The HUH management reports significant capital needs. Capital expenditures were curtailed while the hospital had significant operating deficits, but with improved operations, the HUH is making over \$6 million in capital investments this current fiscal year and anticipates increased capital spending. We view the hospital as relatively small for an academic medical center, having 8,166 admissions in 2016; and acuity is low, with a 1.6 overall case mix. We consider

the payer mix weak, with Medicaid representing 26% of total 2017 hospital revenues. For year-to-date through September 2017, inpatient admissions are down 3% compared with the same period a year earlier. Outpatient visits have declined significantly since 2014 due to a transfer of visits to the faculty practice plan. Visits totaled 16,142 in 2016, compared with 35,971 in 2015 because of this transfer of outpatient visits from the hospital to the faculty practice plan.

On Oct. 6, 2014, Howard hired Paladin Healthcare LLC to take day-to-day managerial responsibilities for the HUH's operations. This followed several years of declining financial and clinical performance. Since then, the hospital's emergency department wait-time metrics have improved, as have efficiencies and documentation in case management programs and protocols, resulting in better clinical billing and documentation. HUH management and the school of medicine have several physician recruitment initiatives, particularly in urology, which should enhance microscopic procedures and reduce the number of cases referred elsewhere. In addition, management anticipates growth in obstetrics and gynecology programs because nearby competing hospitals have suspended these services. With management reviewing the HUH's patient documentation as well as operations, we expect that demand trends will stabilize and net patient revenues will begin to improve significantly.

#### Fundraising

Management reports that plans for a comprehensive capital campaign are under development. For fiscal 2017, Howard received \$21.9 million in gifts and pledge payments. This was the highest total since 2005 during the most recent capital campaign. The university is in the midst of planning for a capital campaign, although the total fundraising goal has not yet been set.

#### Management and governance

Howard has a 35-member board, 28 of whom are general trustees the board elects for three-year terms. There is a three-term limitation, but the chair may waive this. Three alumni trustees that the alumni elect and two elected faculty members also sit on the board, with a maximum of two three-year terms. Two student members can serve for two one-year terms. The president is an ex-officio trustee, without a vote.

Management has experienced significant turnover. Dr. Sidney A. Ribeau, who became Howard's president in 2008, announced his retirement in October 2013 amidst friction with the board. Many of the key positions were filled on an interim basis. Dr. Wayne Frederick, who was provost under Dr. Ribeau, became president in July 2014 and his contract was recently extended through 2026. In April 2015, Michael Masch became the new CFO. Over the past two years, many significant key management positions were filled permanently. We expect that with this, there will be more stability at Howard, improved relations with the board, and better ability to focus on improving fiscal operations.

The new senior management initiated the first stage of a multiyear turnaround plan in the fall 2015. The initial focus has been on expenditure reductions to better align expenditures with the revenue base, and the HUH has achieved positive operations for two consecutive years. However, in the long term, the university is evaluating its strategic options with respect the hospital, including getting out of the health care business. Management is also reviewing revenue growth opportunities from operations and asset monetization at both the HUH and university. In addition to financial goals, some of Howard's key strategic priorities include a focus on building a culture of academic excellence and rigor; infusing service into the university culture; and increasing philanthropic efforts.

# **Financial Profile**

#### Financial management policies

Howard has formal policies for investments and debt, but no formal liquidity policy. The university meets the standards for annual disclosure requirements and reports full-accrual interim results. The financial policies assessment reflects our opinion that, while there may be some areas of risk, the organization's overall financial policies are not likely to negatively affect its ability to pay debt service. Our analysis of Howard's financial policies includes a review of Howard's financial reporting and disclosure, investment allocation and liquidity, debt profile, and contingent liabilities; and a comparison of these policies to those of comparable institutions.

#### Revenue diversity and federal appropriation

The university's revenue mix remains a credit strength, in our opinion. Adjusted fiscal 2017 operating revenues included 25.4% federal appropriations, most of which are unrestricted; 33.5% tuition, fees, and student charges; 28.6% hospital and patient income; and 6.3% grants and contracts. Howard has a fairly standard endowment spending draw, in our view, at 5% of the rolling-three-year market value average lagged one year; the university held to this level in the fiscal years 2010-2017 operating budgets despite operating pressures. Howard's federal appropriation had been flat in recent years, unlike many state appropriations to public institutions. Federal appropriations were \$230 million-\$231 million in each fiscal year from 2008-2013 but declined in 2014 and 2015 by 4.7% and 4.8%, respectively, following the federal "sequester," which reduced all discretionary domestic spending in the federal budget by similar percentages. However, for fiscal 2016, federal appropriation increased 4.6% to \$221.8 million. For fiscal 2017, federal appropriations were steady, and the president's proposed budget for federal fiscal 2018 continues this level. We also understand that Howard does not routinely receive a federal capital appropriation, although there have been precedents for this, including a capital appropriation for two campus libraries many years ago.

#### **Financial performance**

The university has a history of uneven financial performance with significant operating deficits on an unrestricted basis. It had reported full-accrual operating surpluses for fiscal years 2011-2013; however, these had been declining. For fiscal year-ends 2011, 2012, and 2013, full-accrual operating surpluses were \$9.3 million, \$7.8 million, and \$4.2 million, respectively. In fiscal 2014, the university reported an operating deficit of \$48 million. For fiscal 2015, the operating deficit increased to \$56 million. Fiscal 2016 resulted in a surplus of \$9.5 million; for fiscal 2017, Howard reported a deficit of \$34 million largely due enrollment declines. This deficit excludes income of \$33 million from defeased bonds, because it is one-time. Including it, operations would have resulted in a significantly smaller deficit. Fiscal 2018 is budgeted for a surplus, which is achievable given improved hospital operations and assumes improvement at the university, which will benefit from improved enrollment.

Included in Howard's consolidated results is the wholly owned HUH. The hospital's recent decline in performance has contributed to the university's worsening overall financial performance. The HUH had break-even to positive operating results from fiscal years 2009-2012. However, in fiscal years 2013 and 2014, the hospital had significant operating deficits of \$23.2 million and \$58.7 million, respectively, due to declining patient volumes without an adjustment in operations. As a result, management hired Paladin to improve operations. In fiscal 2015, the HUH had a \$19.2 million deficit and a \$19.9 million surplus for fiscal 2016 with a similar surplus for 2017. Paladin significantly improved clinical

documentation and brought labor levels in line with current volume. These efforts have helped increase patient revenues and reduce operating expenses, as well as enhance cash collections. In fiscal 2016, Paladin accelerated the pace of improvement, with better revenue-cycle performance increasing revenues per discharge, reducing full-time equivalent (FTE) count by 13%, and renegotiating two union contracts. Management sustained these results into fiscal 2017 as it realizes the full effects of its cost-containment efforts. It plans to continue these efforts, and implement additional revenue enhancement, for fiscal 2018.

Historically, Howard was profitable, but in fiscal 2015, it had a full-accrual deficit of \$36 million that contributed to 2015 operating loss. Both net tuition revenues and federal appropriations declined in fiscal 2015 and contributed to the deficit. For fiscal 2016, operations improved and the deficit fell to \$8.3 million as Howard reduced costs through both staffing reductions and non-personnel reductions. However, for fiscal 2017, the decline in enrollment meant student-derived revenues dropped and the university had a \$17.3 million deficit. Expectations for fall 2017 are for improved enrollment, which, combined with Howard's continued plans to seek operational efficiencies in academic programing as well as administrative efficiencies, should result in improved financial performance in fiscal 2018. Management is budgeting for a return to surpluses at the university, which we believe is achievable.

We believe significant strategic challenges remain for both Howard and its hospital. We expect that the financial performance will stabilize and be positive in 2018. We believe a key challenge for management will be developing a long-term plan for the HUH, given its small size and aging plant, while maintaining the teaching programs of the health sciences departments. The university faces some of the same challenges, including needed renovations and improved productivity from both financial and educational aspects.

#### Available resources

Howard's total net assets were \$621 million at the end of fiscal 2017, of which \$222 million was unrestricted (UNA), \$266 million was temporarily restricted, and \$132 million was permanently restricted. We view the university's financial resource ratios as low. We typically use expendable resources (ER) to measure balance-sheet strength, which we calculate by adjusting UNA for debt outstanding, net plant, and temporarily restricted net assets. For Howard, at June 30, 2017, ER were \$393 million (up from negative \$535,000 in fiscal 2010), but still equal to only 44% of operating expenses and 89% of debt. In measuring liquidity using cash and investments at fiscal year-end 2017, we view resource ratios as more consistent with those of peer 'BBB' rated institutions. Cash and investments equaled about 80% of expenses and 161% of debt. Howard's endowment had a market value of about \$647 million at June 30, 2017, equal to \$76,715 per FTE, which is stronger than those of 'BBB' peers. The market value as of June 30 was \$730 million. The asset allocation mix at that time was conventional, in our view, with about 49% in equities, 16% in fixed income, 28% alternative and 6% in cash and equivalents. The asset allocation is consistent with the audited investment levels at fiscal year-end 2017, which classified 40% of endowment investments as level 1, 45% as level 2, and 15% as level 3. We consider level 1 and 2 investments as the most liquid.

#### Debt and contingent liabilities

Debt outstanding at June 30, 2017 (the most recent audit date), was \$443 million. This included long-term bonds and capital leases. In fiscal 2016, Howard replaced a line of credit with \$160 million series 2016 bonds. Bond proceeds retired the line of credit, reduced several years of payables, and provided liquidity. In addition, the university has a \$75 million line of credit with JPMorgan Chase Bank N.A.. With improved operating performance, Howard has reduced its

dependence on these lines and at fiscal year-end had no draws on them. The long-term bonds are general obligations of the university, and there is a debt service reserve. The 2011A and 2011B fixed-rate bonds refinanced most of Howard's debt, and simplified bond covenants to a 1.1x debt service coverage pledge. The university complies with its bond covenants.

In fiscal 2016, Howard issued \$160 million in variable rate bonds that we do not rate. The bonds are backed by an LOC from Barclays Bank PLC. Should there be a draw on the LOC, repayment on the draw is over a multi-year period. However, an event of default would occur and repayment would accelerate if the rating on the university falls to below 'BB' (from S&P Global Ratings) or Ba3 from Moody's. Moody's rates Howard Ba2 so the university is close to this potential trigger. However, to date there have been no draws on the LOC. We believe a failed remarketing risk is remote. Still, such an event, combined with a Moody's downgrade of the university, could stress Howard. We believe in such a remote circumstance the university would have sufficient liquidity to repay the LOC draw while seeking alternative long-term financing.

The debt burden is moderate, at 4.2% of fiscal 2017 operating expenses. Howard is reassessing its initial 10-year master plan so that it realigns more closely with the strategic priorities. Because the strategic plan is ongoing, there are no plans for additional debt over the next two years. We will evaluate the university's capacity for additional debt, including nonrecourse financing and bank line usage, at the time of issuance, particularly in relation to progress in financial performance.

Howard also has \$108 million in off-balance-sheet housing debt associated with Provident Group-Howard Properties LLC (Provident LLC), a not-for-profit corporation organized to construct student housing for Howard. The housing facility opened in August 2014 and consists of 1,360 beds. Occupancy for fall 2017 is what we consider high, at 97%. In addition, in January 2017, Howard transferred title to four on campus housing facilities to a wholly owned special-purpose entity and entered a 40-year service concession agreement with Corvias Campus Living-HU LLC. The concessionaire will renovate, operate, and maintain the four housing facilities. As part of that transaction, there is \$144 million in off-balance-sheet debt associated with these units, of which \$40 million repaid debt on Howard's balance sheet that was associated with Towers and Cook Hall. Occupancy for fall 2017 is 104%. We do not expect any operational issues associated with either project.

Substantially all full-time university employees participated in a noncontributory, defined benefit retirement plan. Effective July 1, 2010, the pension plan was closed to new employees and frozen in relation to accruing defined pension benefits. Existing employees began participating in a defined contribution plan. In addition, Howard provides postretirement medical benefits and life insurance benefits to employees -- it funds this plan on a pay-as-you-go basis. As of June 30, 2017, the pension liability was \$139 million, and the other postemployment benefit liability was \$51 million.

#### Howard University -- Enterprise And Financial Statistics

|  |         | Fiscal y | year ended . | June 30  |         |  |
|--|---------|----------|--------------|----------|---------|--|
|  | 0045    | 0010     | 0045         | 0014     |         | Medians for 'BBB' rated private colleges |
|  | 2017    | 2016     | 2015         | 2014     | 2013    | and universities, 2016                   |
| Enrollment and demand                          |         |          |              |          |         |  |
| Headcount                                      | 8,966   | 10,002   | 10,265       | 10,297   | 10,002  | MNR                                      |
| Full-time equivalent                           | 8,428   | 9,352    | 9,530        | 9,515    | 9,294   | 2,642                                    |
| Freshman acceptance rate (%)                   | 30.0    | 49.0     | 48.4         | 57.0     | 49.3    | 72.5                                     |
| Freshman matriculation rate (%)                | 16.5    | 22.5     | 22.2         | 24.1     | 24.2    | MNR                                      |
| Undergraduates as a % of total enrollment (%)  | 65.8    | 68.8     | 68.3         | 67.7     | 66.9    | 73.4                                     |
| Freshman retention (%)                         | 96.0    | 86.0     | 89.4         | 84.0     | 82.6    | 78.6                                     |
| Graduation rates (six years) (%)               | 63.0    | 59.4     | 59.9         | 63.2     | N.A.    | MNR                                      |
| Income statement                               |         |          |              |          |         |  |
| Adjusted operating revenue (\$000s)            | 892,940 | 882,391  | 896,008      | 893,676  | 924,413 | MNR                                      |
| Adjusted operating expense (\$000s)            | 893,916 | 872,890  | 952,387      | 941,659  | 920,215 | MNR                                      |
| Net operating income (\$000s)*                 | (976)   | 9,501    | (56,379)     | (47,983) | 4,198   | MNR                                      |
| Net operating margin (%)                       | (0.11)  | 1.09     | (5.92)       | (5.10)   | 0.46    | 0.78                                     |
| Change in unrestricted net assets (\$000s)     | 66,797  | (44,667) | (108,042)    | (6,829)  | 171,074 | MNR                                      |
| Tuition discount (%)                           | 40.2    | 39.5     | 41.7         | 36.1     | 34.6    | 38.0                                     |
| Tuition dependence (%)                         | 27.7    | 29.1     | 29.5         | 28.8     | 26.9    | MNR                                      |
| Student dependence (%)                         | 32.3    | 35.1     | 35.5         | 36.1     | 33.6    | 89.4                                     |
| Health care operations dependence (%)          | 27.6    | 29.1     | 28.9         | 27.5     | 29.8    | MNR                                      |
| Research dependence (%)                        | 6.0     | 6.4      | 7.2          | 6.4      | 6.3     | MNR                                      |
| Endowment and investment income dependence (%) | 2.3     | 1.5      | 1.6          | 1.5      | 1.4     | MNR                                      |
| Debt   |         |          |              |          |         |  |
| Debt outstanding (\$000s)                      | 443,327 | 481,437  | 538,787      | 413,537  | 393,328 | 54,629                                   |
| Proposed debt (\$000s)                         | N.A.    | N.A.     | N.A.         | N.A.     | N.A.    | MNR                                      |
| Total pro forma debt (\$000s)                  | 443,327 | N.A.     | N.A.         | N.A.     | N.A.    | MNR                                      |
| Pro forma MADS                                 | N.A.    | N.A.     | N.A.         | N.A.     | N.A.    | MNR                                      |
| Current debt service burden (%)                | 4.18    | 4.57     | 4.00         | 2.10     | 2.15    | MNR                                      |
| Current MADS burden (%)                        | 4.43    | 4.53     | 3.49         | 2.68     | 2.75    | 4.17                                     |
| Pro forma MADS burden (%)                      | N.A.    | N.A.     | N.A.         | N.A.     | N.A.    | MNR                                      |
| Financial resource ratios                      |         |          |              |          |         |  |
| Endowment market value (\$000s)                | 646,556 | 577,132  | 590,659      | 591,902  | 514,073 | 63,098                                   |
| Cash and investments (\$000s)                  | 715,307 | 656,859  | 649,514      | 646,817  | 585,053 | MNR                                      |
| Unrestricted net assets (\$000s)               | 222,310 | 155,513  | 200,180      | 308,222  | 315,051 | MNR                                      |
| Expendable resources (\$000s)                  | 393,220 | 296,850  | 370,143      | 352,940  | 318,148 | MNR                                      |
| Cash and investments to operations (%)         | 80.0    | 75.3     | 68.2         | 68.7     | 63.6    | 79.2                                     |
| Cash and investments to debt (%)               | 161.3   | 136.4    | 120.6        | 156.4    | 148.7   | 150.7                                    |
|  |         |          |              |          |         |  |

| Howard University Enterprise And Financial Statistics (cont.) |       |           |             |        |      |  |  |  |  |
|---|-------|-----------|-------------|--------|------|--|--|--|--|
|   |       | Fiscal ye | ar ended Ju | ıne 30 |      |  |  |  |  |
|   | 2017  | 2016      | 2015        | 2014   | 2013 | Medians for 'BBB' rated private colleges<br>and universities, 2016 |  |  |  |
| Cash and investments to pro forma debt (%)                    | 161.3 | N.A.      | N.A.        | N.A.   | N.A. | MNR  |  |  |  |
| Expendable resources to operations (%)                        | 44.0  | 34.0      | 38.9        | 37.5   | 34.6 | 49.4   |  |  |  |
| Expendable resources to debt (%)                              | 88.7  | 61.7      | 68.7        | 85.3   | 80.9 | 83.1   |  |  |  |
| Expendable resources to pro forma debt (%)                    | 88.7  | N.A.      | N.A.        | N.A.   | N.A. | MNR  |  |  |  |
| Average age of plant (years)                                  | 21.7  | 22.9      | 19.4        | 17.1   | 14.4 | 13.5   |  |  |  |

\*Fiscal 2017 figure includes \$33 million in one-time revenue from defeased bonds. MADS--Maximum annual debt service. MNR--Median not reported.N.A.--Not available.

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