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PUBLIC RESOURCES ADVISORY GROUP

Memorandum to: Department of Water and Power of the City of Los Angeles

From: Public Resources Advisory Group

Subject: Financial Metrics

Date: June 12, 2013

At the request of the Department of Water and Power of the City of Los Angeles ("LADWP"), Public Resources Advisory Group ("PRAG") has prepared the following update on setting financial metric targets for the Power and Water Systems. PRAG had previously provided a similar review in a memorandum dated September 12, 2011 (the "2011 Memo"). This memorandum updates our views on the use of financial metrics for internal planning purposes, rating agencies' medians for certain financial metrics, comparisons of LADWP's existing financial metrics to select peer groups, and possible adjustments to the current financial metric guidelines applicable to the Power and Water Systems.

Appropriateness of Financial Metrics. As stated in the 2011 Memo, before relying on financial metrics for planning purposes, it is important to understand these metrics in their appropriate context. There are many metrics that each measure a different aspect of a utility's financial profile. While differing in their precise focus, what the various financial metrics attempt to provide is numerical data which facilitates evaluating the performance of a utility's operations and its long-term sustainability into the future—which effectively equates to evaluating its credit strengths and weaknesses. These areas can include: (1) safety margin for payment of obligations; (2) extent of leveraging; (3) liquidity position; (4) magnitude of potential additional debt necessary to support capital expenditures sufficient to sustain operations; and (5) operating and revenue risk, among other credit factors.

Using financial metrics as a planning tool can be valuable to utilities, especially as rating agencies and investors also look to financial metrics to help evaluate credit ratings and investment decisions, respectively, which can directly impact the cost of borrowing for utilities. However, since financial metrics are basically numbers, relying on them solely for planning purposes should be limited, because they cannot capture the meaningful qualitative aspects of an issuer's situation—including operating, demographic, political, and regulatory risks. In the rating methodology report "U.S. Public Power Electric Utilities with Generation Ownership Exposure" published on November 9, 2011 (the "2011 Methodology Report") by Moody's Investors Service ("Moody's"), it cites financial metrics ("Financial Metrics", referred to as "financial strength" in the report) as one of *five* key rating factors and for which Moody's has assigned a 30% weighting in their credit evaluation methodology, while other non-quantitative factors result in a 70% weighting. Another important consideration is that when comparing financial metrics across issuers, different operating traits and business characteristics can distort their relative credit strengths. As one example, two issuers can be at two different points in their asset lifecycles, and by extension, could have very different levels of outstanding liabilities, which would impact their financial metrics for safety margin for payment and extent of leveraging. As a result, financial metrics, in isolation, can be imprecise measures of credit strength and better serve as general guideposts and as one component of an issuer's benchmarks for planning.

Selecting Financial Metrics and Comparisons. Due to some of the limitations discussed above, it is important, albeit challenging, to select appropriate issuers that LADWP can be compared to in terms of financial metrics. One source for determining suitable comparable issuers is the rating agencies. As a result, for this analysis, PRAG first looked to the rating agencies' published rating criteria, special commentaries, and reports to identify comparable issuers.

The three major rating agencies for municipal bonds—Moody's, Standard & Poor's Financial Services LLC ("S&P"), and Fitch Ratings Inc. ("Fitch")—do not focus on precisely the same metrics, but do share similar core principles. The rating agencies each focus on unique sets of financial metrics (with some overlap) to assess an issuer's creditworthiness and its ability to pay its financial obligations. In general, the rating agencies have focused on: (1) debt service (and also fixed charge, in the case of electric systems to reflect off-balance sheet obligations) coverage ratios; (2) debt-to-capitalization ratios; and (3) liquidity ratios. It is generally acceptable to have trade-offs across these financial metrics. In other words, weakness in one metric may be somewhat offset by strength in another, especially when the weakness is consistent with a fundamental operating characteristic of the issuer. Additionally, because the rating process is to some extent subjective, the precise impact of each financial metric is not an exact science. While rating agencies have, in recent years, increased the transparency of the rating process by providing weighting factors and guidelines for evaluating credits, such as the 2011 Methodology Report, these guidelines themselves frequently include a statement to the effect that other factors or any outlier factors may be considered and given additional weight in evaluating the creditworthiness of a particular issuer. To demonstrate, PRAG compiled actual data as calculated by Moody's for public power issuers and sorted and compared these data points against the range of values for different rating categories as described in the 2011 Methodology Report. The actual data for individual issuers span well beyond the stated range and that even the median values are not necessarily consistent across rating categories. For example, as shown in the following table, the median "Days of Cash" for Aa-rated entities is non-intuitively lower than that for A-rated entities, and median "Debt Service Coverage" for A- and Aa-rated entities are both surprisingly much higher than the range of ratios published in the 2011 Methodology Report.

Financial Metric	Moody's Rating	Stated Range of Ratios	Actual Data by Issuer (3-year average)		
			Low	Median	High
Debt Service Coverage	Aa	2.00x to 2.49x	1.0x	3.1x	53.7x
	A	1.50x to 1.99x	0.6x	2.3x	46.5x
	Baa	1.10x to 1.49x	0.8x	1.4x	3.8x
Debt Ratio	Aa	26% to 50%	3%	36%	573%
	A	51% to 75%	3%	44%	218%
	Baa	76% to 100%	26%	80%	233%
Days of Cash	Aa	150 to 249	15	142	1,455
	A	90 to 149	8	171	1,360
	Baa	30 to 89	10	111	350

Our observations above support the notion that financial metrics should only be considered as one of many credit factors and should be treated accordingly by utility issuers. Rating agencies recognize these limitations and use financial metrics as only one part of their assessment when assigning credit ratings. We note that comparing financial metrics for LADWP specifically is made more challenging as many other utilities have established additional protections for bondholders, such as debt service reserve funds, debt service funds, and greater than "sum-sufficient" rate covenants while LADWP does not provide any of these security provisions.

In addition, it is meaningful to narrow the focus when comparing LADWP to other entities. Given the unique statutory requirements and regulatory environment for utilities in California, it is meaningful to limit comparisons to those other in-state issuers which must abide by similar operating constraints. Additionally, entities should share the same focus on retail customers as LADWP, as wholesalers tend to operate quite differently and their credit ratings are frequently defined by the credit strength of the retail systems they serve. The discussion below focuses the financial metrics comparison for each of LADWP's systems to narrower "peer" groups.

Power System Comparison. For the Power System, the comparison is limited to no more than the 41 public power utilities in California which directly serve retail customers. Many of these utilities are considerably smaller entities with little generation and transmission assets, and are also generally lower rated than LADWP. For the purposes of this analysis, we have restricted the comparison to those larger retail public power utilities in California which, in general, generate or sell at least one million megawatt-hours each year. Consequently, this eliminates most of the issuers in the lowest investment grade category of "triple-B" or below.

However, even the larger utilities in California are generally significantly smaller than LADWP, such that a single generation asset may be sufficient to provide a substantial portion of their energy needs. Therefore, their financial metrics can fluctuate greatly in accordance with the different stages of a single asset's lifecycle. Additionally, different levels of participation in take-or-pay energy arrangements, on-balance-sheet gas-prepayment arrangements, and single project-based financings can distort financial metrics. Keeping in mind these limitations, the table below sets forth four financial metrics for 16 other "large" California retail public power utilities (yellow highlighted entries are "double-A" issuers), using the same general method that is used by the rating agencies to allow the financial metrics to be compared across this diverse peer group of issuers on a relatively consistent basis. This comparison of financial metrics shows that LADWP's Power System is generally (1) stronger than its California peer group members with respect to debt service coverage, (2) about the same with respect to debt ratio and (3) weaker with respect to liquidity.

Utility	Credit Rating			Financial Metric[1]			
	Moody's	S&P	Fitch	Current Debt Service Coverage[2]	Current Fixed Charge Coverage, including Transfers[3]	Debt Ratio[4]	Days of Cash on Hand[5]
LADWP	Aa3	AA-	AA-	3.01x	1.71x	60%	68[6]
Anaheim	A1	AA-	AA-	1.77x	1.20x	73%	39
Burbank	WR	AA-	WR	4.40x	1.43x	34%	116
Glendale	Aa3	AA-	A+	4.76x	1.02x	28%	59
Imperial Irr. Dt.	A1	AA-	A+	1.22x	1.23x	48%	89
Merced Irr. Dt.	Baa2	A	WR	1.99x	1.52x	57%	246
Modesto Irr. Dt.	A2	A+	A	1.62x	1.37x	95%	63
Palo Alto	NR	NR	NR	4.22x	1.63x	1%	581
Pasadena	WR	AA-	AA	3.00x	1.30x	23%	320
Redding	A2	A	A	1.95x	1.22x	64%	73
Riverside	Aa2	AA-	AA-	1.93x	1.20x	62%	296
Roseville	A2	A+	A+	2.66x	1.30x	57%	137
SMUD	A1	AA-	A+	1.80x	1.62x	88%	96
SFPUC	NR	NR	NR	11.52x	6.23x	16%	678
Santa Clara	A1	A+	A+	4.78x	1.90x	28%	382
Turlock Irr. Dt.	A2	A+	A+	0.99x	0.99x	81%	288
Vernon	Baa1	A-	NR	0.65x	0.47x	89%	58
Median	*A1*	*AA-*	*A+*	*1.99x*	*1.30x*	*57%*	*116*
Double-A Median	-	-	-	*3.01x*	*1.25x*	*47%*	*92*
Single-A Median	-	-	-	*1.80x*	*1.30x*	*64%*	*96*

(1) Compiled using information from annual financial statements of each entity for the most recent fiscal year.
(2) Calculated as the sum of net operating income, non-operating interest earnings and other income and depreciation divided by debt service; does not include transfers from rate stabilization or similar funds.
(3) Calculated as the sum of net operating income, non-operating interest earnings and other income, 30% of purchase power cost and depreciation divided by the sum of debt service, 30% of purchased power cost and transfers out.
(4) Calculated as total liabilities divided by total assets.
(5) Calculated as unrestricted cash and investments divided by operating expenses less depreciation.
(6) Does not include Debt Reduction Trust Fund.

Power System Financial Metrics. Based on a review of the data in the table above and assuming LADWP seeks to maintain its current Power System ratings at Aa3/AA-/AA- (Moody's/S&P/Fitch), there may be some ability to modify the long-term financial metric targets. However, we would caution LADWP that changes in financial metrics could result in a change in its credit ratings and that even a single-notch downgrade would place the credit of the Power System in the less than "double-A" rating category. Credit ratings of less than "double-A" are more costly to issuers as it relates to financing costs, specifically, higher fixed rate yields, higher variable rate yields, higher credit enhancement costs, and reduced market access.

Based on the data presented above, the current ratings of the Power System, the anticipation that LADWP's operating expenses will grow significantly over the next few years, the transparency provided by Moody's with the Financial Metrics, including a focus on fixed charge coverage, in PRAG's opinion, LADWP could choose to set its target financial metrics at (1) the current target Debt Ratio of 68% (no change), (2) a Fixed Charge Coverage ratio of 1.70x, instead of a gross Debt Service Coverage ratio of 2.25x, and (3) maintaining 170 days Cash on Hand, inclusive of the Debt Reduction Trust Fund ("DRTF"), and sustain a "double-A" credit rating.

For issuers with off-balance sheet debt and transfers to another entity, the rating agencies view fixed charge coverage as a better measure of safety margin of debt payments. Therefore, with LADWP's obligations to off-balance sheet debt repayments to the Intermountain Power Agency and the Southern California Public Power Authority along with the recurring annual transfers to the City of Los Angeles, a fixed charge coverage target is more appropriate than a gross debt service coverage target. As it relates to the change to 170 days Cash on Hand, as opposed to a fixed dollar amount of $300 million plus the DRTF, a target that increases as operating expenses increase (and vice versa) better reflects the liquidity position of a utility.

With a Fixed Charge Coverage target of 1.70x, PRAG cautions LADWP that Moody's has made recent comments over fixed charge coverages which in recent years have been "…getting closer to falling out of the A rating according to our [Moody's] methodology." It is also important to note that the rating agencies have been very clear and consistent about the need for LADWP to achieve other important operational and policy goals, including instituting timely rate increases. Failure to achieve these other important goals, possibly as a result of adjusting target financial metrics, would more than likely result in rating downgrades to the Power System.

Water System Comparison. Like the Power System, direct comparisons to LADWP's Water System are also difficult. Many of the retail water systems in California consist of only a distribution network with few capital assets. Larger entities with substantial capital assets, similar to LADWP, tend to be wholesale utilities with only agricultural, commercial and/or industrial retail connections. Still other entitites benefit from a disproportionately large supply of water (from historic water rights/ownership and local groundwater sources) and do not require the same levels of operational infrastructure as LADWP. For the purpose of a comparison to LADWP, PRAG identified the ten largest "double-A"-rated water systems in Southern California with a significant number of retail customers, as well as the two largest such systems in Northern California, and six large "double-A" (or slightly higher) rated wholesale entities in Southern California. Similar to the Power System peer group analysis, the table below sets forth three financial metrics for each of these utilities, using the same general method as that used by the rating agencies to allow the metrics to be compared across different issuers on a relatively consistent basis.

Utility	Credit Rating			Financial Metric[1]		
	Moody's	S&P	Fitch	Current Debt Service Coverage[2]	Debt Ratio[3]	Days of Cash on Hand[4]
Retail Systems						
LADWP	Aa2	AA	AA	1.86x	60%	199
Cucamonga Valley Wtr. Dt.	Aa3	AA	WR	1.90x	48%	305
East Bay MUD	Aa1	AAA	AA+	1.12x	69%	475
Eastern MWD	Aa2	AA	AA+	1.37x	41%	401
Imperial Irrigation District	Aa2	AA	WR	8.42x	25%	170
Long Beach	Aa2	AA+	NR	9.84x	15%	268
Pasadena	NR	AA	AA+	3.24x	43%	74
Rancho California Wtr. Dt.	Aa2	AA+	AA+	1.86x	41%	372
Riverside	Aa2	AAA	AA+	2.82x	43%	644
San Diego	Aa2	AA-	AA	1.67x	39%	436
SFPUC	Aa3	AA-	WR	1.53x	93%	124
Santa Ana	Aa2	AA	NR	2.17x	25%	143
Western MWD	WR	AAA	AA	1.58x	34%	316
Median (Retail Systems)	*Aa2*	*AA*	*AA+*	*1.86x*	*41%*	*305*
Wholesale Systems						
Calleguas MWD	Aa2	AAA	NR	2.09x	41%	790
Central Basin MWD	Aa2	AA	NR	0.65x	67%	177
Metropolitan Wtr. Dt. of So. Cal.	Aa1	AAA	AA+	1.83x	46%	208
San Diego County Wtr. Auth.	Aa2	AA+	AA+	1.34x	66%	193
WRD of So. Cal.	NR	AA+	AA+	1.34x	71%	253
West Basin MWD	Aa2	AA-	NR	1.56x	65%	190
Median (Wholesale Systems)	*Aa2*	*AA+*	*AA+*	*1.45x*	*59%*	*200*

(1) Compiled using information from annual financial statements of each entity for the most recent fiscal year.
(2) Calculated as the sum of net operating income, non-operating interest earnings and other income and depreciation divided by debt service; does not include transfers from rate stabilization or similar funds.
(3) Calculated as total liabilities divided by total assets.
(4) Calculated as unrestricted cash and investments divided by operating expenses less depreciation.

Overall, LADWP's financial metrics are seemingly weaker than those of other retail water systems in California, but are more similar to wholesale water systems in Southern California. This can be attributed to the sizeable Water System, inclusive of a large amount of capital assets and related debt, which has similar characteristics to that of a wholesaler, not of a retailer.

Water System Financial Metrics. Based on a review of the data in the table above and assuming LADWP seeks to maintain its current Water System ratings at AA/Aa2/AA (Fitch/Moody's/S&P), there may be some ability to modify its long-term financial metric targets. Once more, we would caution LADWP that changes in financial metrics could result in changes in its ratings, including a possible downgrade which would make certain debt-related costs more expensive, such as higher fixed rate yields and higher credit enhancement costs. In January 2012, the Water System was downgraded from AA+ to AA by Fitch due to "…financial margins that have trended lower over the past few years…" and "The downgrade was triggered by slimmer financial margins." As with the Power System, the anticipated benefit and flexibility afforded by relaxed financial metrics could be partially offset be additional debt-related costs; although, the mid “double-A” ratings of the Water System affords LADWP some flexibility to be aggressive with any adjustments to financial metrics.

Based on the data presented above and the current ratings of the Water System, in PRAG’s opinion, LADWP could choose to set its target financial metrics for the Water System at (1) a greater Debt Ratio of 65% versus 60% and (2) a lower Debt Service Coverage ratio of 1.70x versus 2.00x, and (3) maintaining 150 days Cash on Hand, instead of a fixed dollar amount of $200 million which is smaller than 150 days of cash and does not grow as operating expenses increase, and sustain a “double-A” credit rating. The 150 days Cash on Hand would increase the Water System’s cash position as the rating agencies have repeatedly cited the weak cash position in the past; however, the lower Debt Service Coverage is a credit negative. Similar to the discussions above for the Power System, other operating factors that result from changing financial metric targets could negatively impact the credit ratings of the Water System.

Summary. As discussed above, while LADWP provides fewer bondholder protections (no debt service reserve funds, no debt service funds, and only a sum sufficient rate covenant) than many other similarly-rated utilities, it may have the opportunity to adjust it financial metric targets as they relate to the Power and Water Systems. With this strategy, however, we believe there is greater risk from being aggressive with financial metrics for the Power System as its ratings are currently just above the “single-A” rating category from all three rating agencies and a single downgrade would likely be costly. With higher ratings, the Water System can afford more aggressive adjustments in its financial metrics. However, LADWP should be aware that negative rating agency reactions are possible since the existing financial metrics were approved by the Board not very long ago and the credibility of any of LADWP’s stated policies, in general, may be called into question.