# Northern California Power Agency

## November 2017

## Finance Committee Materials

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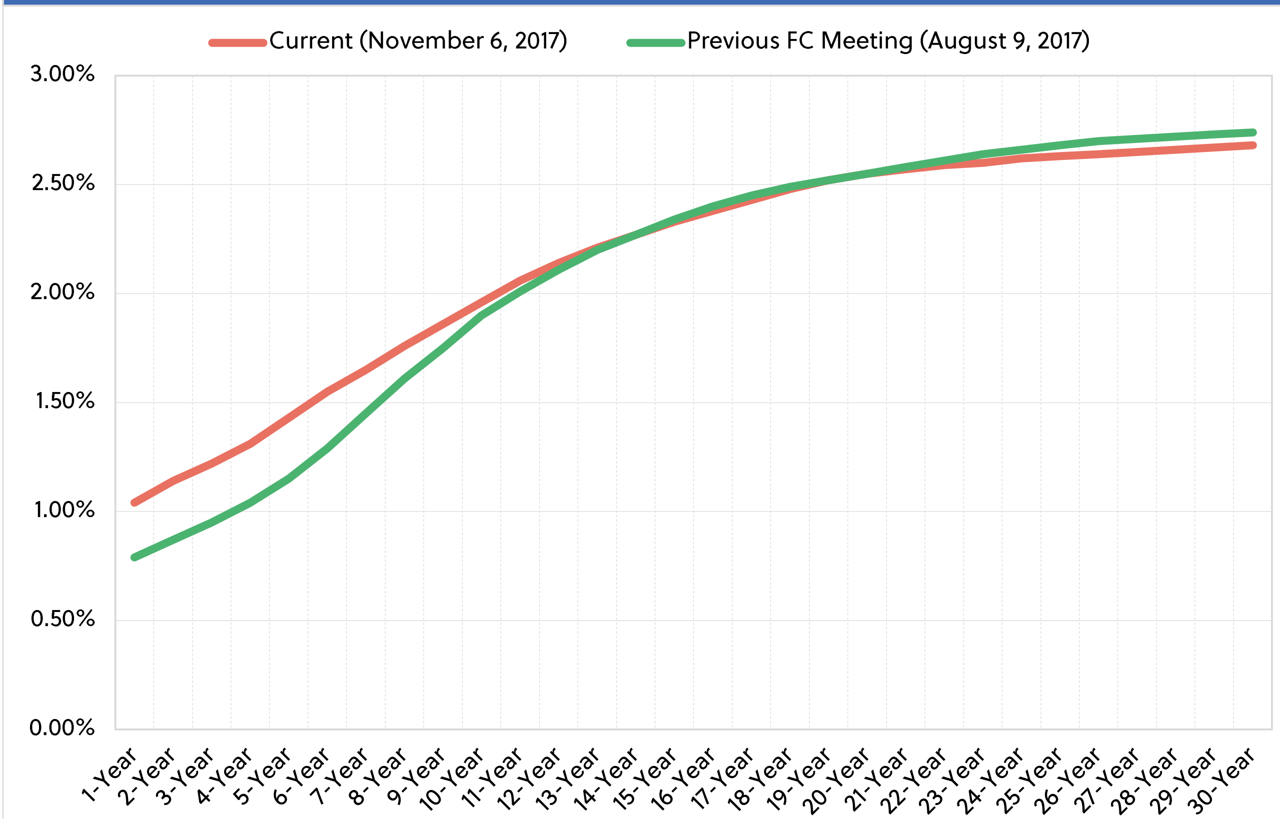
# Report on Current Financial Market Conditions or Issues

*Data, rates, and related statistics and charts are as of November 6, 2017, unless otherwise indicated*

# AAA MMD Rates and Yield Curve Movement

**AAA MMD Rates and Yield Curve Movement**




| Maturity | 8/9/17 | 11/6/17 | Δ |
|---|---|---|---|
| 1-Year | 0.79% | 1.04% | *0.25%* |
| 2-Year | 0.87% | 1.14% | *0.27%* |
| 3-Year | 0.95% | 1.22% | *0.27%* |
| 4-Year | 1.04% | 1.31% | *0.27%* |
| 5-Year | 1.15% | 1.43% | *0.28%* |
| 6-Year | 1.29% | 1.55% | *0.26%* |
| 7-Year | 1.45% | 1.65% | *0.20%* |
| 8-Year | 1.61% | 1.76% | *0.15%* |
| 9-Year | 1.75% | 1.86% | *0.11%* |
| 10-Year | 1.90% | 1.96% | *0.06%* |
| 11-Year | 2.01% | 2.06% | *0.05%* |
| 12-Year | 2.11% | 2.14% | *0.03%* |
| 13-Year | 2.20% | 2.21% | *0.01%* |
| 14-Year | 2.27% | 2.27% | *0.00%* |
| 15-Year | 2.34% | 2.33% | *-0.01%* |
| 16-Year | 2.40% | 2.38% | *-0.02%* |
| 17-Year | 2.45% | 2.43% | *-0.02%* |
| 18-Year | 2.49% | 2.48% | *-0.01%* |
| 19-Year | 2.52% | 2.52% | *0.00%* |
| 20-Year | 2.55% | 2.55% | *0.00%* |
| 21-Year | 2.58% | 2.57% | *-0.01%* |
| 22-Year | 2.61% | 2.59% | *-0.02%* |
| 23-Year | 2.64% | 2.60% | *-0.04%* |
| 24-Year | 2.66% | 2.62% | *-0.04%* |
| 25-Year | 2.68% | 2.63% | *-0.05%* |
| 26-Year | 2.70% | 2.64% | *-0.06%* |
| 27-Year | 2.71% | 2.65% | *-0.06%* |
| 28-Year | 2.72% | 2.66% | *-0.06%* |
| 29-Year | 2.73% | 2.67% | *-0.06%* |
| 30-Year | 2.74% | 2.68% | *-0.06%* |

***Key Takeaway:*** ***The yield curve has flattened over the past few months – interest rates on the short-end have increased while those on the intermediate- and long-end have remained flat***

*Source: Thomson Reuters*

## Interest Rate Forecasts

- Market participants continue to call for a gradual increase in interest rates as shown in the data compiled by Bloomberg below

| The Street's Interest Rate Forecast (As of November 6, 2017) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Average Forecasts** | **Current** | **Q4 17** | **Q1 18** | **Q2 18** | **Q3 18** | **Q4 18** | **Q1 19** |
| **30-Year UST** | 2.79% | 2.90% | 3.05% | 3.19% | 3.29% | 3.40% | 3.50% |
| **10-Year UST** | 2.32% | 2.34% | 2.45% | 2.57% | 2.69% | 2.82% | 3.02% |
| **2-Year UST** | 1.62% | 1.63% | 1.75% | 1.91% | 2.07% | 2.21% | 2.38% |
| **3M LIBOR** | 1.39% | 1.56% | 1.72% | 1.90% | 2.05% | 2.05% | 2.36% |
| **Fed Funds Target Rate (Upper)** | 1.25% | 1.50% | 1.60% | 1.85% | 1.95% | 2.10% | 2.15% |
| **Fed Funds Target Rate (Lower)** | 1.00% | 1.25% | 1.37% | 1.59% | 1.71% | 1.85% | 1.90% |

***Key Takeaway:*** ***There is continued expectation of a 25 basis point Fed rate hike in December 2017***

*Source: Bloomberg*

# Tax Cuts and Jobs Act (H.R. 1) Offers First Look at a Detailed Tax Reform Plan

**Special Report** November 2017

Since yesterday's introduction of the U.S. House of Representatives' tax reform plan – the "Tax Cut and Jobs Act (H.R. 1)," PFM has been working to understand the potential impact that the various proposals could have on our clients. While the 429-page tax plan contains many areas of interest for state and local governments and non-profit institutions, one area that may have a disproportionate impact on our clients' finances is the section related to Bond Reform. As previewed earlier this year, Congress has taken action to scale back tax benefits related to certain municipal bonds and bond refundings, although it has preserved tax-exemption on outstanding municipal bonds and many types of future governmental bond issues.

Below is a brief overview of the proposed changes impacting state and local government bond financing and the bond financing activities of non-profit institutions.

## H.R. 1 Eliminates the Interest Exclusion for Private Activity Bonds (PABs)

While tax-exemptions for outstanding municipal and qualified non-profit bonds have been preserved, the current legislation eliminates the interest exclusion for qualified PABs issued after 2017. Under current law, the interest earned on qualified PABs is exempt from the taxation and the bonds typically command a correspondingly lower interest rate than taxable securities. Under the provisions of H.R. 1, the interest earned on future PABs would be taxable.

## H.R. 1 Repeals the Advance Refunding Exemption & Tax Credit Bonds (TCBs)

Other proposed bond reforms include the repeals of the Advance Refunding Exemption and TCBs.

- **Advance Refunding Bonds.** Under current law, interest on advance refunding bonds — bonds issued more than 90 days before the redemption date of the refunded bonds — generally is not taxable for governmental bonds. The proposed legislation would keep the tax-exemption for interest on current refunding bonds, but eliminate the exemption for interest on advance refunding bonds.
- **Tax-Credit Bonds.** In contrast to tax-exempt bonds, which exclude interest paid to the bondholder from taxation, most TCBs allow the bondholder to claim a federal tax credit equal to a percentage of the bond's par value for a limited number of years. The issuers of TCBs typically pay no interest to bondholders, which can result in a larger federal subsidy to the issuer than a traditional municipal bond. Under the proposed legislation, the rules relating to TCBs would be repealed. While holders and issuers would continue receiving tax credits and payments for previously issued TCBs, no new bonds could be issued after 2017.

## H.R. 1 Subjects Bonds Issued for Professional Sports Stadiums to Federal Tax

The proposed tax reform bill provides that interest on bonds issued to finance the construction of, or capital expenditures for, a professional sports stadium would be subject to Federal tax. Unlike the other bond reform proposals, this provision would take effect for bonds issued after the date of introduction (i.e., November 2nd, 2017).

## Conclusion

These are only the proposals related to bond issuances – there are a number of other major changes proposed in the bill which impact individual taxpayers, business, and state and local governments. As a vivid example, a provision in Title V of the bill would impose a revised excise tax (at a rate of 1.4%) on the net investment income of certain private higher education institutions that have at least 500 students and assets (other than those used directly in carrying out the institution's educational purposes) of at least $100,000 per full-time student.

The ultimate legislative outlook for H.R. 1 remains unclear, but the House Ways and Means Committee is scheduled to begin marking the bill up on Monday, November 6th. As groups affected by these changes comb through the details of the legislation and engage their constituencies and media on certain elements of the legislation, timely comments and near-term negotiations will be critical for the tax reform proposal.

PFM has begun engaging in communication with key trade associations representing clients and tracking their responses to the legislation. We continue to monitor developments as they arise and will provide additional updates as the package continues to evolve.

Given the market uncertainty resulting from the proposed tax legislation, we encourage you to reach out to your advisor at PFM to discuss any concerns you may have or to better understand the potential impact on your financing plans and finances. Ultimately, the most effective way to share any comments you may have on the proposed federal legislation is to reach out directly to your local Congressional representatives.

## Resources

Tax Cuts and Jobs Act, H.R. 1, 115th Cong., Ways and Means Committee Majority Tax Staff (2017). available at https://waysandmeansforms.house.gov/uploadedfiles/tax_cuts_and_jobs_act_section_by_section_hr1.pdf

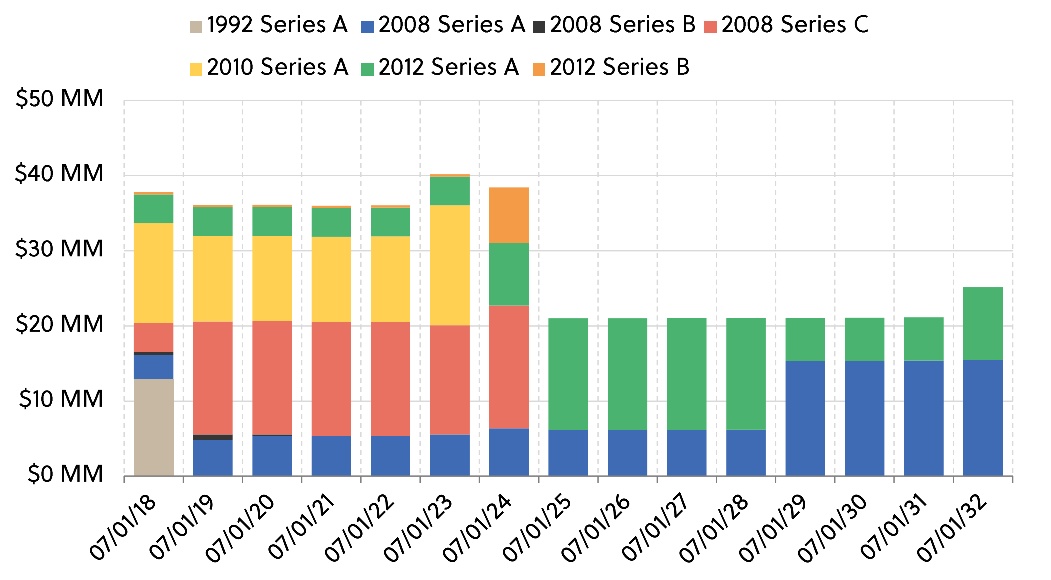
"Lifeline or Loophole? Municipal Bond Tax Exemption Faces a Year of Scrutiny." *Issuer Insight* June 2017. https://www.pfm.com/docs/default-source/default-document-library/issuer-insight---lifeline-or-loophole-municipal-bond-tax-exemption---june-2017.pdf?sfvrsn=0

# Report on NCPA's Debt Portfolio and Review of Underwriter RFP Results

# Hydroelectric Project Debt Overview

| Hydroelectric Project Participation Percentages | |
|---|---|
| **Member** | **Entitlement Share (%)** |
| Alameda | 10.000 |
| Biggs | 0.100 |
| Gridley | 1.060 |
| Healdsburg | 1.660 |
| Lodi | 10.370 |
| Lompoc | 2.300 |
| Palo Alto | 22.920 |
| Roseville | 12.000 |
| Santa Clara | 35.860 |
| Ukiah | 2.040 |
| Plumas-Sierra | 1.690 |

Hydroelectric Project Debt Service




| Summary of Outstanding Hydroelectric Project Debt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Ratings (M/S/F): Aa3/A+/A+, Stable Outlooks | | | | | | | |
| **Series** | **Tax Status** | **Coupon Type** | **Issue Size** | **Outstanding Par** | **Coupon Range** | **Call Date** | **Final Maturity** |
| 1992 Series A | Tax-Exempt | Fixed-Rate | $195,610,000 | $12,155,000 | 6.300% | Non-Callable | 7/1/2018 |
| 2008 Series A | Tax-Exempt | Variable-Rate | $85,160,000 | $85,160,000 | Var. (3.819%) (S) | Current | 7/1/2032 |
| 2008 Series B | Taxable | Variable-Rate | $3,165,000 | $1,235,000 | Variable (V) | Current | 7/1/2020 |
| 2008 Series C | Tax-Exempt | Fixed-Rate | $128,005,000 | $77,130,000 | 5.000% | 7/1/2018 | 7/1/2024 |
| 2010 Series A | Tax-Exempt | Fixed-Rate | $101,260,000 | $62,975,000 | 5.000% | 7/1/2019 | 7/1/2023 |
| 2012 Series A | Tax-Exempt | Fixed-Rate | $76,665,000 | $76,665,000 | 5.000% | 7/1/2022 | 7/1/2032 |
| 2012 Series B | Taxable | Fixed-Rate | $7,120,000 | $7,120,000 | 4.320% | Make-Whole | 7/1/2024 |

*(S) Swapped; Please see next page for details, (V) 4% variable rate assumed for debt service chart*

# Hydroelectric Project Debt Overview (Cont'd)

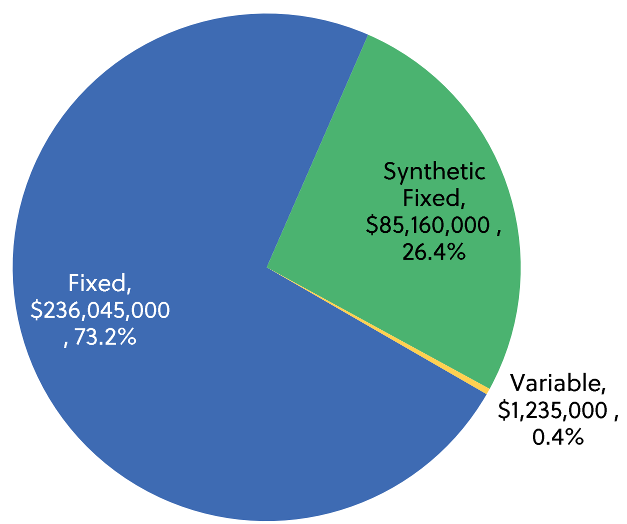
**Hydroelectric Project Swap Summary**

| Series | NCPA Pays | NCPA Receives | Trade Date | Effective Date | Maturity Date | MTM Value *(As of 10/31/17)* | Initial Notional | Current Notional | Bank Counterparty |
|---|---|---|---|---|---|---|---|---|---|
| 2008 Series A | 3.8190% | 54% of USD-LIBOR + 0.54% | 11/24/04 | 11/24/04 | 7/1/32 | ($17,331,276) | $85,160,000 | $85,160,000 | Citibank, N.A., New York (A1/A+/A+) |
| 2008 Series B | USD-LIBOR | 5.2910% | 11/24/04 | 11/24/04 | 7/1/32 | $220,248 | $1,574,000 | $1,108,537 | Citibank, N.A., New York (A1/A+/A+) |

**Hydroelectric Project Liquidity Summary**

| Series | LOC Provider | LOC Expiry | Last Reset |
|---|---|---|---|
| 2008 Series A | Bank of Montreal (Aa3/A+/AA-) | September 09, 2019 | 0.89% |
| 2008 Series B | Bank of Montreal (Aa3/A+/AA-) | September 09, 2019 | 1.25% |

**Breakdown of Hydroelectric Project Debt Type**



# Hydroelectric Project Number One, 2008 Series C | *RFP Results Overview*

- NCPA solicited public sale and direct purchase proposals for the refunding of its Hydroelectric Project Number One, 2008 Series C Bonds
  - $77,130,000 outstanding; $77,130,000 callable July 1, 2018; Majority not advance refundable

- NCPA received responses from eleven qualified underwriters. NCPA and PFM reviewed and evaluated all and were in agreement that Citi's and Goldman Sachs's were the best

- Given the size of the potential transaction, upcoming current refunding timing, and better pricing on public sale options, direct purchase proposals do not make sense for the refunding of these bonds
  - NCPA received three direct purchase proposals

***Key Takeaway:*** ***Citi and Goldman Sachs provided the best responses.***

# Hydroelectric Project Number One, 2008 Series C / *Economics and Schedule*

- The refunding of the Hydroelectric Project, 2008 Series C Bonds are expected to generate approximately $9 million in present value savings, representing over 11% of refunded par
  - There are certain nuances that need to be worked through such as a proceeds-to-proceeds restriction, transferred proceeds penalty, and reserve fund considerations. But these should not substantially dampen the economics

| Savings | |
|---|---|
| | **Public Sale** |
| Par Amount of Bonds Refunded | $77,130,000 |
| Refunded Maturities | 2019 – 2024 |
| Par Amount of Refunding Bonds | $70,835,000 ($1.25mm taxable) |
| Rate | MMD + Avg. of UW Spreads |
| Issuance Costs | $536,463 |
| All-In True Interest Cost | 1.69% |
| Average Life of Refunded Bonds | 3.88 years |
| Present Value Savings | $8,770,835 |
| PV Savings as Pct. of Refunded Par | 11.37% |
| Negative Arbitrage | $88,368 |
| Escrow Efficiency | 99.00% |

**Recommended Financing Schedule for Refunding**

| Event | Date |
|---|---|
| Kick-off | Week of 12/4 |
| Determine Structure and Hedging (if any) | Early Dec |
| Distribute Documents | Mid Dec |
| Review Documents | Late Dec |
| Doc Review, Structuring and Draft Rating Pres | Mid Jan |
| Rating Agency Meetings | Week of 1/29 |
| Expected Release of Major Participant Financials | Week of 1/29 |
| Finalize Documents | Early Feb |
| Receive Ratings | 2/16/2018 |
| Post POS | 2/20/2018 |
| Price Hydroelectric Bonds | 2/28/2018 |
| Close | 4/3/2018 |
| Redeem 2008C Hydroelectric Bonds | 7/1/2018 |

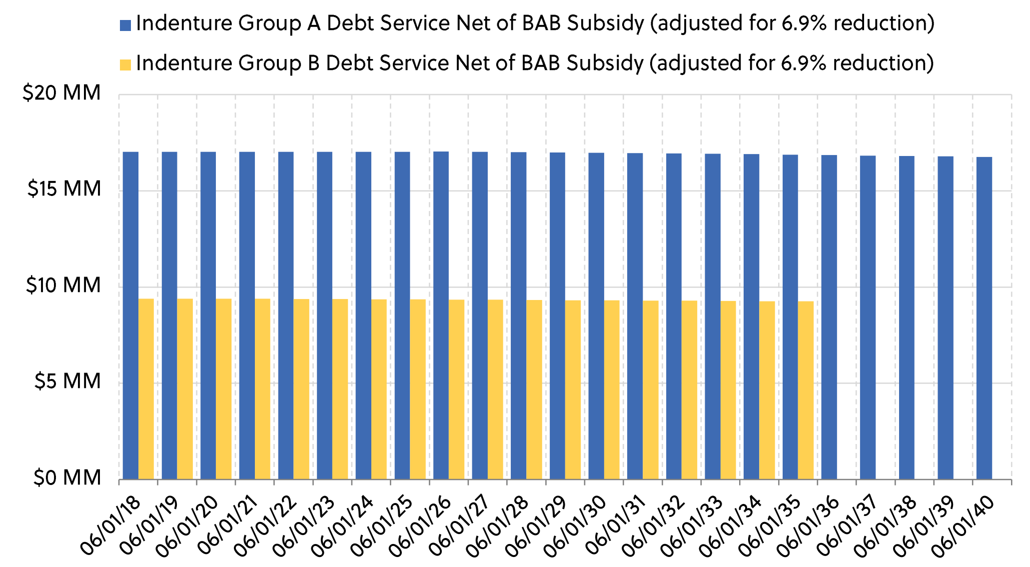
***Key Takeaway:* *Despite certain nuances, there are substantial savings to be generated by executing a current refunding***

*Schedule from Citi proposal; Interest rates as of October 30, 2017; Transferred Proceed Penalty of $659,849 assumed as placeholder; Proceeds-to-proceeds restriction of $78.8 mm assumed as placeholder; No Reserve Fund or Surety*

# Lodi Energy Center Debt Overview

| LEC Participation Percentages | | |
|---|---|---|
| **Member** | **Entitlement Share (%)** | **Ind. Group A Cost Share (%)** |
| CDWR | 33.5000 | - |
| Azusa | 2.7857 | 4.9936 |
| Biggs | 0.2679 | 0.4802 |
| Gridley | 1.9643 | 3.5212 |
| Healdsburg | 1.6428 | 2.9448 |
| Lodi | 9.5000 | 17.0295 |
| Lompoc | 2.0357 | 3.6491 |
| Santa Clara | 25.7500 | 46.1588 |
| Ukiah | 1.7857 | 3.2010 |
| MID | 10.7143 | - |
| Plumas-Sierra | 0.7857 | 1.4084 |
| PWRPA | 2.6679 | 4.7824 |
| SFBART | 6.6000 | 11.8310 |

**Lodi Energy Center Debt Service**




| Summary of Outstanding Lodi Energy Center Debt | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Series** | **Tax Status** | **Coupon Type** | **Issue Size** | **Outstanding Par** | **Coupon Range** | **Next Call** | **Final Maturity** |
| **Indenture Group A \| Ratings (M/S/F): A1/A-/A, Stable Outlooks** | | | | | | | |
| 2010 Series A | Tax-Exempt | Fixed-Rate | $78,330,000 | $53,775,000 | 5.000% | 6/1/2020 | 6/1/2025 |
| 2010 Series B | Taxable BABs | Fixed-Rate | $176,625,000 | $176,625,000 | 7.311% (T) | Make-Whole | 6/1/2040 |
| **Indenture Group B—CADWR \| Ratings (M/SF): Aa2/AAA/ , Stable Outlooks** | | | | | | | |
| 2010 Series A | Tax-Exempt | Fixed-Rate | $30,540,000 | $9,685,000 | 5.000% | Non-Callable | 6/1/2019 |
| 2010 Series B | Taxable BABs | Fixed-Rate | $110,225,000 | $110,225,000 | 4.630%-5.679% (T) | Make-Whole | 6/1/2035 |

*(T) Taxable Build America Bonds; Interest rate gross of BAB subsidy*

# Lodi Energy Center, Issue One, 2010 Series A / *Refunding Overview*

- NCPA also solicited public sale and direct purchase proposals for the refunding of its LEC, Issue One, 2010 Series A Bonds
  - $53,775,000 outstanding; $36,020,000 callable June 1, 2020; Advance Refundable
- In addition to the Underwriter RFP responses, NCPA received two attractive direct purchase offers from Bank of America and KeyBank
- While the public sale will likely to lead to better pricing as shown below, there are several considerations as highlighted on the next page

**Comparison of Savings**

| | Public Sale | Conservative Public Sale | BofAML DP |
|---|---|---|---|
| Par Amount of Bonds Refunded | $36,020,000 | $36,020,000 | $36,020,000 |
| Refunded Maturities | 2021 – 2025 | 2021 – 2025 | 2021 – 2025 |
| Par Amount of Refunding Bonds | $33,460,000 | $33,625,000 | $39,110,000 |
| Rate | MMD + Avg. of UW Spreads | MMD + Avg. of UW Spreads + 10 bps | 2.15% |
| Issuance Costs | $316,920 | $317,250 | $200,000 |
| All-In True Interest Cost | 1.88% | 1.98% | 2.25% |
| Average Life of Refunded Bonds | 5.54 years | 5.54 years | 5.330569761 |
| Present Value Savings | $2,960,517 | $2,769,345 | $2,236,986 |
| PV Savings as Pct. of Refunded Par | 8.22% | 7.69% | 6.21% |
| Negative Arbitrage | $71,549 | $161,155 | $460,013 |
| Escrow Efficiency | 97.64% | 94.50% | 82.94% |

***Key Takeaway:** In the current market, a public sale would be more economic; however, there are other considerations at play such as ease of execution and timing that favor a direct purchase*

*Rates as of October 30, 2017*

# Lodi Energy Center, Issue One, 2010 Series A | *Direct Purchase Considerations*

- **Ease of execution:** With no disclosure document or ratings requirement, a direct purchase would be substantially easier to execute, particularly with a firm such as Bank of America that NCPA has direct purchase experience with on its Geothermal bonds
- **Timing:** Given the ease of execution, a direct purchase could be completed by year-end – a possibly important date if the new tax reform plan is passed as is (eliminating advanced refundings). It also takes interest rate exposure off the table sooner
- **Issuance Costs:** A direct purchase would have lower issuance expenses given no underwriter's discount and rating agency fees

| Public Option—Capital Markets Bond Sale | Private Option—Direct Purchase Bank Loan |
|---|---|
| Pros<br>• Lowest borrowing rates due to inherent price discovery process of a bond sale in capital markets<br>• Proven method that has been executed numerous times in the past<br>Cons<br>• Complete disclosure documents will need to be prepared, adding to administrative burden and time<br>• Rating(s) will need to be obtained, adding to issuance costs, administrative burden, and time<br>• Higher upfront issuance cost and underwriter's discount | Pros<br>• Simplest and quickest to execute<br>— No disclosure document; administratively simpler for NCPA/Participants<br>— No need to obtain a rating<br>— Limits interest rate exposure and heads off any tax reform concerns<br>• Lower issuance cost<br>• Proven method that has been executed numerous times in the past<br>Cons<br>• Less transparent, making it harder to know if NCPA got the best yield |

# Lodi Energy Center, Issue One, 2010 Series A | *Direct Purchase Schedule*

- We have put together a preliminary schedule below that aims to have the direct purchase transaction completed by year-end, if NCPA chooses to move forward now

| Date | Activity |
|---|---|
| **November 8th** | • NCPA Finance Committee meeting |
| **November 15th** | • First draft of Bank and Legal documents distributed |
| **November 22nd** | • Comments on Bank and Legal documents provided |
| **November 29th** | • Second draft of Bank and Legal documents distributed |
| **December 1st** | • Conference call to review provided comments and second draft of Bank and Legal documents |
| **December 6th**<br>**December 8th** | • Further revised drafts of Legal and Bank documents distributed<br>• Conference call to review further revised Legal and Bank documents |
| **December 12th**<br>**December 13th**<br>**December 14th** | • Near-final drafts of Legal and Bank documents distributed<br>• Special NCPA Finance Committee meeting (w/ approval of refunding documents)<br>• Packets with near-final documents submitted for NCPA Commission meeting |
| **December 21st** | • Special NCPA Commission meeting to approve documents and Direct Purchase |
| **December 22nd** | • Closing |

***Key Takeaway:** A direct purchase could be completed by year-end* pfm