Exhibit to Agenda Item #2

Board Strategic Development Committee and Special SMUD Board of Directors Meeting

Tuesday, March 10, 2020, scheduled to begin at 5:30 p.m.
Auditorium, SMUD Headquarters Building
SMUD First Ever Green Bond in 2019

2019 Series G bond transaction - $75 million issued to reimburse for HQ Renovation expenditures

- SMUD’s First Green Bonds
- Used a 3rd party verifier - Kestrel Verifiers

Green Bond Market –

- Investor base is growing but issuers not realizing a pricing benefit
- More issuers providing verifiable assurance of the green characteristics for projects being funded
- Almost $200 billion total issuance nationally through 2019
- CA leading the way with $9.5 billion issued for 59 deals through 2019
Considerations for SMUD

Benefits:

• Expanded investor base
• Alignment of infrastructure development to our climate goals
• Demonstrates commitment to environmental initiatives
• SMUD can better plan financing to fund larger utility scale green projects

Challenges:

• Green Bond certification requirements not yet fully defined
• Due to pursuit of lowest cost and reduced project risk, qualified green projects could be built by 3rd party cheaper = no SMUD financing (SMUD costs would be O&M)
• Aligning reporting and ongoing disclosure requirements after certification
• Timing of qualifying projects to take advantage of market opportunities
Green Bonds and the Municipal Market

March 10, 2020
Green and ESG Bonds: Background

- Investors interest has increased in recent years for “bonds with a purpose”
- The municipal bond funds have responded through the creation of
  - Green Bond Funds
  - Environmental Social and Governance (ESG) funds
  - Coming soon...”Blue Funds” for water and ocean restoration
- Gaining momentum due to
  - Generational wealth transfer from the Baby Boom
  - Increased societal awareness
  - Climate change concerns
- PFM assists many of our power and other clients with this new market segment
Green and ESG Investors
How Large is the Green/ESG Market?

- Continues to gain strength and momentum
- Investors developing “Green” and “ESG” funds
- 2019 saw 20% growth from 2018 with expectations of continued growth
- Europe leads the way with Green Bonds
- U.S. is a very small participant in this market and municipal utilities even smaller
Greenwashing

‘Green Bonds’ for a Parking Garage?
Massachusetts agency sells debt associated with environmentally friendly projects for a car-centric structure

Illustrates the need to have an “honest broker” that can attest to the “Greenness” of the projects that bonds resource

Rating Agency Trends: Green Bonds

- Rating Agencies continue to roll-out their Green Bond Strategies
- Relatively straight forward evaluation

**Moody's**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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<tbody>
<tr>
<td>15%</td>
<td>Organization</td>
</tr>
<tr>
<td>40%</td>
<td>Use of proceeds</td>
</tr>
<tr>
<td>10%</td>
<td>Disclosure on use of proceeds</td>
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<tr>
<td>15%</td>
<td>Management of proceeds</td>
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<tr>
<td>20%</td>
<td>Ongoing reporting and disclosure</td>
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- Issuers have to commit to ongoing disclosure
- We do note that Moody's and a European firm, Vigeo, merged in 2019
Rating Agency Trends: Green Bonds

- Rating Agencies continue to roll-out their Green Bond Initiatives
- S&P is more quantitative in nature (compared to Moody’s/Vigeo)

Our Green Evaluation Approach

Weighted aggregate of three:
- Transparency
- Governance
- Mitigation or Adaptation = Green Evaluation

Common approach used amongst second opinion providers

- Transparency:
  - Use of proceeds reporting
  - Reporting comprehensiveness

- Governance:
  - Management of proceeds
  - Impact Assessment Structure

Unique to S&P Global Ratings

- Mitigation:
  - Buildings, industrial efficiencies, energy infrastructure, transport, and water

- Adaptation:
  - Resilience capex such as flood defenses, asset protection etc.

- Net Benefit Ranking:
  - eKPIs: Carbon, Waste, Water Use

- Cost Benefit Ranking:
  - Resilience benefit ratio: Estimate of reduction in damages if event occurs

- Hierarchy Applied

- Environmental Impact

- Resilience Level

- Mitigation Score

- Adaptation Score

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Rating Agency Trends: Green Bonds

- Rating Agencies continue to roll-out their Green Bond Initiatives
- Fitch does not have a formal process, but incorporates an assessment into the bond ratings (currently, no surprises for issuers)

*We are writing to let you know about an enhancement to our public finance and infrastructure issuer credit research. Environmental, social and governance (ESG) factors are featuring more prominently in our discussions with investors and market participants, but understanding exactly which of these factors impact credit rating decisions has been challenging for the market to discern.*

*Responding to requests for greater transparency surrounding these issues, Fitch introduced ESG Relevance scores as part of its research suite for corporate issuers in January, for financial institutions in February, and sovereigns in April. We will be extending ESG Relevance scores to all public finance and infrastructure issuers within a couple of weeks.*
Rating Agency Trends: Green Bonds

- Rating Agencies continue to roll-out their Green Bond Initiatives….but yet to have a pricing benefit in the bond market (a “greenium”)

- Issuers have generally been power (renewables) and water (clean rivers) as well as housing (energy efficiency programs)

- Some are controversial (3 Gorges Dam in China)
Other Third Party Opinions: Green Bonds
Disclosure Expectations: Annual Reporting

- DC Water has 3rd party opinion and
- Accounting attestation on segregation of funds and use of proceeds
Green: Not just a “Municipal” effort

- Many municipal issuers are making progress toward “Green”
  - Sustainability reports
  - Climate change policy

- Some of these municipal efforts are well behind their competitors and public companies:
Conclusions

• A growing market - continues to gain strength and momentum (Europe)

• For “credit”, requires a 3d party certification and ongoing disclosure of progress

• Needs an organizational commitment:
  • “Ethos”
  • Desire to lend credibility to the cause
  • Public Relations
  • Ongoing disclosure and project management efforts

• Investors – remain curious but will not pay a premium price

• Public Relations issues – what is green and environmentally responsible?

• Public Power presence – limited compared to Water & Sewer

SMUD is well positioned for the future with prior Green Certification, forward-thinking generation mix, high renewable/carbon goals, California footprint and environmentally conscience ethos
Market Update

Equity Markets fell more than 10% in one week – stabilized for now

Federal Reserve implemented an emergency .50% Fed Funds rate cut

Interest Rates at all time lows

- The Municipal Benchmark Yield - 30 yr. Municipal Market Data (MMD), used to determine SMUD borrowing costs at 1.52%
- 10 yr. Treasury under 1% (reached 0.66% on 3/6)
- 30 yr. Treasury at 1.61%
SMUD Exploring Near-term Financing

New Capital Funding – planned $300 million this year; market opportunity to issue now at all time lows.

- Green Bonds: if qualifying capital expenditures exist may issue a limited amount

Savings Opportunity - Series 2103 A&B Bonds - Options include:
  - Taxable Refunding – immediate cash flow savings
  - Direct Placement Refunding with a Bank – savings starting in 2023
  - Interest Rate Swap to Hedge a Future Refunding – savings start in 2023

Staff plans to seek approval at the April Finance Committee and Board meeting
Questions?