

January 11, 2021



Ronald W. Smith, Corporate Secretary
Municipal Securities Rulemaking Board
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Washington, DC 20005

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Dear Mr. Smith:

RE: MSRB Request for Input on Strategic Goals and Priorities

We appreciate the opportunity to provide input to the Municipal Securities Rulemaking Board (MSRB) Strategic Goals and Priorities, and we support the Board's efforts to improve its effectiveness and to better serve the municipal markets.

XBRL US is a nonprofit standards organization. Its members include public companies, accounting firms, software, data, and service providers, as well as other nonprofits and standards organizations. The mission of XBRL US is to improve the efficiency and quality of reporting in the U.S. by promoting the adoption of business reporting standards. XBRL US is a jurisdiction of XBRL International, the nonprofit consortium responsible for developing and maintaining the technical XBRL specification, which is a free and open data standard widely used around the world for reporting by public and private companies, as well as government entities.

We support the use of data standards to improve efficiencies in reporting and analyzing municipal financial data, and to explore the opportunity, we have established the XBRL US Standard Government Reporting (SGR) Working Group¹. The working group has developed financial data standards² to support the reporting of Comprehensive Annual Financial Reports (CAFR) in XBRL format.

This letter responds to specific questions raised in the MSRB notice, and asks that the MSRB consider allowing municipal issuers to optionally provide their financial reports in machine-readable (XBRL) format. XBRL is an open, nonproprietary, widely used, global data standard that has been proven to reduce costs, to improve the accuracy and timeliness of data reported, and to adapt easily to changes in technologies and reporting requirements. This standard, applied to municipal issuer reporting, would vastly improve the ability of investors, regulators and other researchers to analyze data more accurately, consistently, and on a more timely basis.

¹ XBRL US Standard Government Reporting Working Group: <https://xbrl.us/home/government/state-and-local-government/>

² XBRL US CAFR Taxonomy, Demonstration Release, covers 7 statements, 2 Single Audit schedules, and selected pension and OPEB data: <https://xbrl.us/xbrl-taxonomy/2020-cafr/>

Response to questions

MSRB Question: *What are the important trends or developments you have your eyes on in the municipal market in the coming years?*

Worldwide, data standards are gaining traction for reporting by public and private companies, as well as government entities. As noted by XBRL International³, more than 150 digital reporting mandates exist across more than 70 countries, requiring digital reporting using XBRL by more than 10 million entities, including private and public companies, and governments. In the U.S., entities reporting to the Securities and Exchange Commission (SEC), the Federal Deposit Insurance Corporation (FDIC), and the Federal Energy Regulatory Commission (FERC) are all required to submit data in XBRL format.

Yet some regulators have considered complicated workarounds to reach the detailed, valuable information buried in financial reports. For example, Natural Language Processing (NLP) has been proposed to extract, monitor, and analyze muni data; concerns exist about the efficacy of this approach, because data integrity is critical when it comes to basing investment decisions on reported data, and cannot be guaranteed with NLP. Similarly, artificial intelligence (AI) has been suggested as a possible solution; and while AI has promise, effective use of AI to glean information from large volumes of data **requires that data used, be in structured, standardized form** to ensure accurate findings. The CFA Institute's Mohini Singh, ACA, Director of Financial Reporting, noted in a recent blog post,⁴ *"For an AI system to effectively extract, understand, analyze, and learn from vast quantities of data, requires access to data that is clearly and unambiguously defined. When it comes to financial data, that can only be XBRL...XBRL data standards cannot be replaced by Artificial Intelligence. AI needs XBRL to provide unambiguous, consistent data to drive machine learning."*

Besides concerns over data accuracy, and the possibility that one such data processing platform may interpret data differently than another, workarounds like AI and NLP are expensive, which inhibits their availability for use with retail and smaller institutional investors. Practical use of these platforms is limited.

Other market trends that are likely to affect the municipal market over the intermediate term include COVID-19, domestic migration, rising pension and retiree healthcare costs, climate change and infrastructure deficiencies, all of which threaten credit quality and could increase market volatility. These trends lead to a greater need for consistent, timely, and potentially more frequent disclosures from municipalities.

In a joint statement⁵ published in May 2020, then SEC Commissioner Jay Clayton and SEC Director of the Office of Municipal Securities Rebecca Olsen, noted, *"Over the years, the*

³ XBRL International: <https://xbrl.org>

⁴ "Should blockchain or AI replace XBRL?", June 2019: <https://xbrl.us/blockchain-ai-replace-xbrl/>

⁵ "The Importance of Disclosure for Our Municipal Markets": <https://www.sec.gov/news/public-statement/statement-clayton-olsen-2020-05-04>

Commission has encouraged municipal issuers to provide robust, timely and accurate information to investors and market participants. The SEC’s focus on this issue has intensified in the past several years as we...have frequently called on municipal issuers to provide investors with more timely information, and also generally raised awareness about the importance of investor access to current financial information.”

“Today, in light of the potentially significant effects of COVID-19 on the finances and operations of many municipal issuers, we increase this focus and request that municipal issuers provide investors with as much information about their current financial and operating condition as is reasonably practicable. The fluid and unpredictable nature of the public health crisis and its financial and economic impacts on municipal issuers has placed investor need for timely financial information into stark relief. We observe that, in today’s markets, the typical practice of providing historic financial information in the form of an annual information filing or similar disclosure may not enable investors to make informed assessments of the municipal issuer’s current and expected future financial condition.”

More frequent disclosures increases the complexity of analysis significantly, making automating data processing through standards even more important.

XBRL also supports continuous change in reporting standards to accommodate revisions in disclosure requirements. For example, SEC reporting requirements change every year and are easily accommodated by the XBRL US GAAP Taxonomy used to support it; 6,000 companies transition seamlessly to a new taxonomy every year. The FDIC changes its reporting requirements for banks every quarter, and again, the FDIC XBRL taxonomy makes transitioning to new requirements easy for the 5,000 banks reporting. Not only is this beneficial for reporting entities, it reduces cost and complexity for the regulator collecting data and the investors and others consuming the data as well.

MSRB Question: How would you assess the effectiveness of the MSRB at advancing its mission? What are we doing well? What should we improve upon?

We appreciate the efforts of the MSRB to educate investors through MuniEdPro, the free online educational program which is well organized and very accessible. The MSRB has also made incremental changes to the EMMA interface that have improved usability.

MSRB Question: How can modernization of EMMA and related technology systems best support users? What gaps should be addressed to enhance market transparency?

Structured financial reports in machine-readable (XBRL) format would be substantially more useful for investors, regulators, and other data users. We urge the MSRB to consider how data standards would impact the current EMMA data collection and dissemination process.

To evaluate this approach, we encourage the MSRB to conduct a voluntary filing program that allows municipalities to opt in to provide their data in XBRL format, and could leverage an XBRL

taxonomy developed by the XBRL US Standard Government Working Group for those issuers who participate. This approach, which mirrors the Voluntary XBRL Filing Program undertaken by the SEC in 2005, would ease the burden on issuers as they could opt in, and would provide sufficient learning to help the marketplace evaluate the usefulness of data standards.

The cost to MSRB of a voluntary program could be minimized by leveraging open source technology developed by the SEC to display XBRL submissions, and by posting XBRL reports submitted by those participating as downloadable links on the MSRB site.

In addition, some public company entities that are private activity bond obligors, such as Pacific Gas and Electric Company (PG&E), submit disclosures to EMMA from their forms 10-K and 10-Q which are already in XBRL format⁶. The figure below shows a partial balance sheet for PG&E which has been prepared using Inline XBRL. Note that every value on the table highlighted in red is “XBRL tagged” and can be extracted automatically. The statement is shown in the open source display tool provided by the SEC which was referenced in the previous paragraph. This viewer can be used to depict any Inline XBRL document, regardless of the taxonomy used.

**PACIFIC GAS AND ELECTRIC COMPANY
(DEBTOR-IN-POSSESSION)
CONSOLIDATED BALANCE SHEETS
(in millions)**

	Balance at December 31,	
	2019	2018
ASSETS		
Current Assets		
Cash and cash equivalents	\$ 1,122	\$ 1,295
Accounts receivable		
Customers (net of allowance for doubtful accounts of \$43 and \$56 at respective dates)	1,287	1,148
Accrued unbilled revenue	969	1,000
Regulatory balancing accounts	2,114	1,435
Other	2,647	2,688
Regulatory assets	315	233
Inventories		
Gas stored underground and fuel oil	97	111
Materials and supplies	550	443
Income taxes receivable	—	5
Other	635	448
Total current assets	9,736	8,806
Property, Plant, and Equipment		
Electric	62,707	59,150
Gas	22,688	21,556
Construction work in progress	2,675	2,564
Other	18	—
Total property, plant, and equipment	88,088	83,270
Accumulated depreciation	(26,453)	(24,713)
Net property, plant, and equipment	61,635	58,557

⁶ Pacific Gas & Electric 10-K SEC filing, December 31, 2019:
<https://www.sec.gov/ix?doc=/Archives/edgar/data/75488/000100498020000009/pcg-20191231.htm>

For EMMA submission today, entities like PG&E must save their filings in PDF format prior to upload. They would likely find it easier to report in XBRL format, and could be part of a voluntary XBRL submission program.

The timing for such a program is appropriate for the following reasons:

- The XBRL specification has evolved significantly since the SEC program was launched, and the first corporate filers began submitting XBRL data in 2009. Reporting entities can now prepare data in multiple formats, including XML, JSON, HTML (a specification called Inline XBRL, which renders their financial reports both human- and machine-readable), and even CSV (spreadsheet).
- XBRL reporting and analytical tools have expanded and matured, because of the wide range of XBRL implementations worldwide. This competitive marketplace of tools ensures low-cost, feature-rich offerings for reporting entities, data collectors and data analysts.
- More and more commercial data providers have transitioned to XBRL-formatted data because processing it is significantly faster and less costly than processing conventional data⁷, which lowers the cost of analysis for all data users.
- Corporations and investors are looking to the standardization of ESG (Environmental Social Governance) data. The Sustainability Accounting Standards Board (SASB) has built a draft XBRL taxonomy⁸ which covers 77 industries, including Electric, Gas and Water Utilities, Rail Transportation, and Health Care Delivery. While the focus of the SASB effort is on corporate data today, these standards could be adapted to support the municipal market as well.
- Several states have begun moving down the path to greater standardization. Florida, which passed [House Bill 1073](#), mandating XBRL for municipal financial reporting, has completed the taxonomy development stage and is poised to begin requiring local government reporting in XBRL. Last year, three Illinois General Assembly members introduced [House Resolution 0703](#) encouraging the use of XBRL for financial reporting by local Illinois governments. Other state and local governments have expressed interest in bringing standards into their reporting infrastructure, and have agreed to post their XBRL-formatted financials on the [XBRL US web site](#)⁹. Pilot programs are underway in California and Illinois; and in discussion in several other states.

⁷ Morningstar's Adrien Cloutier, Global Director of Equity Data noted in a recent video *"Extracting data from an HTML document takes at least 20 minutes, from a good quality PDF, takes around 30 minutes, from an image around 50 minutes. Data pulled from an XBRL file though, can be extracted in 1 to 2 seconds... lets us focus on better analytics rather than scraping data from documents."* Watch video: <https://xbrl.us/news/analyst-video/>

⁸ SASB announcement, As Markets Move Toward Structured Non-Financial Reporting, SASB Engages PwC's XBRL Practice to Support Build of Taxonomy: <https://www.sasb.org/blog/as-markets-move-toward-structured-non-financial-reporting-sasb-engages-pwcs-xbrl-practice-to-support-build-of-xbrl-taxonomy/>

⁹ Financial reports in Inline XBRL (HTML and XBRL) are posted for the cities of Bakersfield, CA, San Buenaventura, CA; the County of Page, VA; and from the College of DuPage, Illinois, and Oakton Community College, Illinois. Separately, Will County, Illinois has posted their financials in XBRL format on their web site: <https://www.willcountyauditor.com/financial-and-statistical-reports>

- As noted earlier, the Standard Government Reporting Working Group has built an open (freely available) XBRL taxonomy which could be leveraged for a voluntary program. This taxonomy covers seven CAFR statements, plan data for pension and OPEBs, and selected schedules from the Federal Single Audit report.

MSRB Question: In what ways should the MSRB deliver on the promise of cloud-based computing to improve the availability of data for enabling market research and analysis?

The ability to conduct research across the universe of entities today is virtually impossible due to the high cost of data acquisition. Moving to structured, searchable, machine-readable (XBRL) data would make this not only possible, but easy to conduct. When data is available in structured format, analyzing thousands of entities requires the same level of effort (and cost) as analyzing a single entity.

MSRB Question: What are the most pressing knowledge and information gaps in the municipal market? How should the MSRB focus its educational efforts to provide value and impact for today's markets?

EMMA, in its current structure, does not give investors the ability to answer questions about the financial health of the entities in which they invest. For example, a typical retail investor is unable to ascertain key credit drivers such as an obligor's total debt, revenues, expenditures, or the value of its assets. The accessibility of these critical data points is hindered because financial reports are not provided in machine-readable format and are often not organized or aggregated by obligor. To address these issues, we believe that innovations will be required in the assignment of obligor and security identifiers as well as the introduction of XBRL.

Among the identifier standards worth considering are Legal Entity Identifiers (although additional research on how it can be clearly defined to apply to US government entities may be needed), Open FIGI and DPC Data's proposed "comprehensive relational database linking every single bond issue to its correct "direct obligor", at the individual cusip-9 level, based on a rigorous and consistent credit-driven methodology".¹⁰

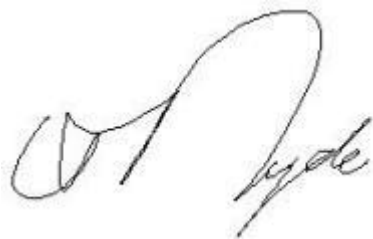
¹⁰ Triet Nguyen, "Solving the Municipal Markets's Fundamental Credit Data Problem", Bond Dealers of America, November 20, 2020. <https://bdamerica.readz.com/solving-the-muni-mrks-fundamental-credit-data-pro>

A way forward

The CAFR (XBRL) data standards built by the XBRL US Standard Government Reporting working group are open and freely available for use. We encourage the MSRB to consider a voluntary pilot program to accept CAFR reports in XBRL format for those entities who opt in. We would be happy to offer our support and expertise to such an initiative. We welcome the opportunity to discuss our recommendations with relevant MSRB staff members.

Please let me know if you have any questions or would like to discuss further. I can be reached at (917) 582 - 6159 or campbell.pryde@xbrl.us.

Regards,

A handwritten signature in black ink, appearing to read "Campbell Pryde". The signature is fluid and cursive, with the first name "Campbell" written in a larger, more prominent script than the last name "Pryde".

Campbell Pryde,
President and CEO