NewGen /VEV/S

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NewGen and MFSG Join Forces!



Effective July 1, 2019, NewGen Strategies and Solutions, LLC (NewGen) and Municipal & Financial Services Group (MFSG) combined forces and will operate under the NewGen name. This merger strengthens NewGen's presence in the northeast, with the addition of an office in Annapolis, Maryland, and expands our clients and capabilities in the Environmental Practice. The combined firms represent a truly national water and wastewater practice.

MFSG offers similar services to NewGen, including:

FINANCIAL SERVICES

- Water, Wastewater, Solid Waste, and Stormwater Cost of Service and Rate Design
- Stormwater Utility Feasibility/ Implementation
- Impact Fee Studies
- Financial Feasibility
- Strategic Financial Planning
- Bond Support

ORGANIZATIONAL MANAGEMENT CONSULTING

- Operations/Management Reviews
- Infrastructure Management/GASB 34
- Organizational Structure
- Litigation Support/Expert Witness Services
- Asset Management

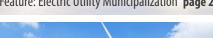
MFSG's Principal, Ed Donahue, joins NewGen as a Director and Vice President of Water / Wastewater. In addition, NewGen welcomed Eric Callocchia (Executive Consultant), Mike Maker (Executive Consultant), Charlie Kassis (Staff Consultant), Nicholas Short (Analyst), and Richard Scarino (Office Manager).

For more information please visit www.newgenstrategies.net or contact:

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Almost every state in the country allows municipalities the right to purchase the electric utility assets that serve their community and become a publicly-owned electric utility. However, the process of municipalization can be difficult, expensive, and time consuming. Often, these efforts take several years to accomplish, involve a significant investment for the potential purchaser, and, perhaps most importantly, are contingent upon resolute political-will in the face of withering public attacks from the incumbent utility (typically an investor owned utility, or IOU). Despite these challenges, between 2003 and 2013, there were 17 new municipal utilities formed, primarily in smaller cities and towns across the country. A municipalization effort may involve several jurisdictions, including local, district, and state courts; state public utility commissions (PUCs); and the Federal Energy Regulatory Commission (FERC).

The following provides a review of the municipalization process, a summary of the policies and market dynamics driving municipal interest, and concludes with lessons learned from NewGen's involvement in several municipalization efforts.

Overview and Market Dynamics of the Municipalization Process

The municipalization process typically begins with a feasibility analysis to determine an average system electric rate required to own and operate a newly formed utility. From a political point of view, the process begins at a much earlier stage as public officials must gauge the interest and desire of their citizens and businesses to engage in such an effort. The feasibility analysis typically includes an analysis of wholesale power prices or contracts, an estimate of asset purchase prices, operations and maintenance costs, and considerations for internal transfers (payments in lieu of tax), special programs (energy efficiency), or other local concerns.

The purchase price for the assets may be based on data provided by the incumbent utility, but typically requires the municipal entity to estimate the type, size, quantity, and value of assets to be acquired. Generally speaking, the municipal entity typically evaluates the purchase of distribution assets only; as the cost of purchasing generation assets may be prohibitive and, in today's power market era,

not necessary to become an operating utility. The resulting financial model is created on a cash basis and evaluates a 15- to 20-year time frame.

The feasibility study also evaluates the current and projected costs associated with continued service from the incumbent utility. This requires an estimate of the customer mix and their electric load within the community. This information is determined from current electric bills (assuming the existing electric utility is willing to share that information), estimated usage data from the municipal water and wastewater utility service, if available, and/or an independent review of the homes and businesses in the community. Current electric tariffs are typically available



on-line, although some pass through provisions (such as for power supply costs) may require additional investigation. An analysis of future rate increases is accomplished via a review of published planning documents prepared by the incumbent utility, including its Integrated Resource Plans and mandated portfolio requirements, as well as other documents, such as the goals and objectives of the utility as it relates to infrastructure improvements over time. Sources such as recent utility rate case filings submitted to the state PUC may be helpful in estimating utility costs and the potential for future rate increases by the IOU.

There are several factors that will influence the outcome of the feasibility study. The primary factors include the age and condition of the distribution assets, the availability and levels of existing and projected power market prices, severance costs, and the potential for stranded costs. The age and condition of the assets are determined by a field review by a qualified engineering firm, which is typically engaged to determine the inventory and replacement cost of the system to be acquired. From this information, the Replacement Cost New Less Depreciation (RCNLD) and the Original Cost Less Depreciation (OCLD) can be estimated based on the selected industry accepted methodology. If the assets are relatively new and in good condition, the estimated accumulated depreciation is lower and results in asset values that are higher than if the assets were older and closer to the end of their useful lives. The ability to develop average system rates in the feasibility study is impacted by whether or not the entity is located in an area with a robust and low-cost wholesale power market, including pricing for renewable resources. Alternatively, an estimate of potential power prices may need to be obtained from indicative bids, which may include the incumbent utility or its wholesale providers. Finally, severance costs are then estimated to physically sever the

Factors Influencing Feasibility Study Outcomes

- Age and condition of the distribution assets
- Availability and levels of existing and projected power market prices
- Severance cost
- Potential for stranded costs

currently integrated distribution system into two distinct and independent systems. Stranded costs refer to the value of assets that are no longer available to the incumbent utility to earn a return upon. Depending on the location and investments to date, there may be zero stranded costs, or they may be significant.



Following the feasibility study, if a municipality decides to proceed with municipalization, there is often protracted legal and public challenges on both sides of the debate. As the municipality seeks to garner support for its efforts, the incumbent utility often attempts to weaken the municipality's credibility and sow fears of uncertainly associated with a change in electric providers. Delaying the process is a common tactic used by the incumbent utility to wear down community resolve and deplete needed resources to fund the municipalization effort. Additionally, the legal challenges must move their way through various courts and regulatory jurisdictions. The feasibility study is then updated with refined estimates of valuation, severance, and stranded costs, the data for which is often provided as the result of a negotiated process between the municipality and the IOU.

The appropriate method for a valuation or an appraisal must be determined, or negotiated, and incorporated into the resulting projection of future rates for the municipal entity. Municipalities have the right of eminent domain to acquire private property for a public purpose but this too presents a unique series of legal challenges in many state jurisdictions. There are system operational considerations and challenges that must be identified and solved, such as how the future utility will obtain its power, maintain its newly acquired assets, and keep its system in balance with its neighboring electric utilities and the grid in general.

A feasibility study evaluates the estimated costs and potential savings associated with a municipalization effort; however, it does not

address the policy and political requirements of undertaking such an effort. Ultimately, the underlying drivers may outweigh the projected feasibility analysis. Typically, the economic analysis (i.e., lower rates) is one of the primary underlying reasons a municipal entity investigates municipalization. However, other rational policies are often under consideration as well. These may include the desire of the community to support greater use of renewable energy, improve service, stimulate economic development, and have greater "local control."

Local control is a critical element in policy decisions regarding municipalization. It can serve as the foundation upon which a desired change in power supply resources can occur. It can also be the driver for entities that wish to increase their support for economic development within a community, which can include a desire to lower industrial rates, for example, to encourage manufacturing, provide local jobs, and opportunities for future generations.

NewGen's Municipalization Lessons Learned

NewGen has been involved with many of the municipalization efforts across the country. As each municipality is unique, so are the approaches to investigating the possibility of owning and operating some or all of the electric assets that serve their community. Each

The bottom line is that a municipality needs to have a clear mandate, an equitable funding mechanism, and a strong political will to establish a municipal electric utility in its community

opportunity provides a unique insight into the character of the community.

For the City of Boulder, Colorado (Boulder), the process has been ongoing since the initial feasibility study was completed in 2005. Boulder has overcome many legal and procedural challenges in court and at the Colorado PUC to determine how facilities would be divided, assigned, and jointly used between Boulder and the incumbent IOU. Boulder citizens provided an ongoing funding mechanism through a self-imposed tax. In June 2019, Boulder filed a condemnation petition with the court to determine valuation issues. However, in September 2019, a judge granted Xcel Energy's motion to dismiss the City's condemnation action, ruling that the Colorado PUC must determine how the electrical facilities should be assigned. divided, or jointly used before the City can file condemnation for utility municipalization.

Similarly, the South San Joaquin Irrigation District (SSJID) in California has faced numerous legal challenges by the incumbent IOU but remains committed to municipalization of the local electric system.

Other entities, such as the City of Decorah, Iowa, after completing a favorable feasibility study, sent the issue to their voters. After much lobbying by the incumbent IOU, the results were an unclear mandate, as the referendum lost by three votes.

Critical to any success is the municipality having a clear and concise strategy to its approach, and an unwavering public mandate. Depending upon the goals and objectives of the municipality and community, the municipality will have to tailor their approach. For instance, if the objective is to have more options

regarding renewable power, or the opportunity to provide lower rates to certain customer classes, the municipality may need to intervene in rate cases at the state PUC in addition to its municipalization effort.

Additionally, municipalities need to have their policy objectives clearly communicated and incorporated into a community outreach program that can easily be understood by the public. Further, they need to prepare themselves for a costly, onerous, and time-consuming process that will depend on continued political support of the local governance and business leaders. A strategic process should be employed to define success before the municipality initiates in efforts in a public manner. Success may be a municipal entity, but success may also be the achievement of all or a portion of its policy goals and objectives. The bottom line is that a municipality needs to have a clear mandate, an equitable funding mechanism, and a strong political will to establish a municipal electric utility in its community.

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NET METERING, DISTRIBUTED ENERGY, AND CALIFORNIA PHOTOVOLTAIC REQUIREMENTS **CONVERGE FOR PUBLIC UTILITIES**

California public utilities are facing strategic net metering rate decisions with the convergence of Title 24 (building codes requiring rooftop solar on all homes beginning in 2020), existing net metering thresholds being exceeded, and Proposition 26 requiring cost of service based rates to eliminate subsidization. As many utilities are exceeding or approaching their 5% NEM threshold of the system peak, they are evaluating their Net Energy Metering 2.0 (NEM 2.0) or successor tariffs. These utilities now must contend with additional solar on all new homes and a requirement to alian cost recovery with the cost of service. With solar positioned to expand dramatically in the coming years, utilities that exceed 5% of their system peak must begin aligning their NEM successor tariffs with the cost of service due to Proposition 26. For utilities that continue to use a full retail credit for NEM rates, similar to the NEM 1.0 requirements, the growing amount of solar will likely drive a material and substantial subsidy within residential customer classes; one at levels that likely can no longer be absorbed within the class. With Proposition 26 requiring cost of service based rates and steps towards the elimination of subsidies among customer classes, where and when will utilities begin creating a new customer class for future NEM customers? Also, when and how will utilities begin implementing increased fixed cost recovery? This convergence of distributed energy resource related issues should drive more utilities to a cost-based NEM rate with substantially higher fixed cost recovery or substantial demand rates for residential customers. Are customers prepared for a dramatic change in their NEM rates when the norm has been full retail credit? Are they prepared to understand that solar may not be as economically viable as it has been for years in California?

SPP EXPANDING MARKETS IN THE WEST WITH ITS ENERGY IMBALANCE MARKET

Western Area Power Administration (WAPA) and Tri-State Generation & Transmission Association (Tri-State) recently announced that they are ioining Southwest Power Pool's (SPP) Western Energy Imbalance Service (WEIS) when it launches in February 2021. This SPP expansion is similar to California Independent System Operator's (CAISO) efforts with Arizona Public Service Company, PacifiCorp, and others in the West. The announcement comes after Xcel Energy abandoned the Mountain West

Transmission Group and effectively halted the planned expansion of SPP to the Mountain West. Now, as CAISO and SPP expand

eneray imbalance market services, will a full ISO in the West regain

momentum?

Acquisition of Electric T&D Assets City and County of San Francisco, CA

NewGen is currently supporting the City and County of San Francisco, California (City) in their efforts to acquire Pacific Gas and Electric Company's (PG&E) electric transmission and distribution (T&D) assets within the City's boundaries and further expand their existing electric utility. NewGen is leading the utility asset appraisal and valuation during the City's initial due diligence phase.

Further information regarding this effort and the City's non-binding indication of interest (IOI) can be found in American Public Power Association's article San Francisco Makes \$2.5 Billion Offer for PG&E's Electric System.



UPDATE ON WATERS OF THE UNITED STATES

On September 12, 2019, the Trump Administration announced that it was fully revoking the 2019 Waters of the United States (WOTUS) rule. The rule originally enacted under the Obama Administration was overturned and the prior regulatory system was restored. The Trump Administration plans to adopt a new rule prior to the end of the year. One side of the debate contends that the Obama-era rule went too far in regulating waterways that were never intended to be regulated under the original 1972 Clean Water Act, while others claim revoking the rule will open up waterways to substantial pollution. Litigation on the appropriate scope of regulation will undoubtedly continue.



RISK AND RESILIENCE ASSESSMENTS

Water and sewer utilities need to be aware that the Environmental Protection Agency (EPA) has a new Risk Resilience Assessment (RRA) and Emergency Response Plan (ERP) compliance deadline coming for systems across the U.S. These key plans are set to come due in 2020 and 2021 with varying deadlines based on the size of the utility's service areas. The law mandates community water systems must prepare an RRA and then develop ERPs in compliance with specific guidelines.

No later than six months after submitting the completed certification of the RRA, the ERP must be submitted. The requirement for compliance is for utilities serving more than 3,300 persons that are served directly or indirectly by the system.

NO WIPES IN THE PIPES!

From Aurora, Colorado to Miami, Florida, wastewater utilities are speaking out about the costly clogs resulting from "flushable" wipes being flushed into sanitary sewers. Flushable wipes are a \$1 billion industry worldwide and although they are marketed as flushable, they are causing big problems in our sewer and wastewater systems. The substantial costs to clear clogged lines along with the cost of cleaning pumps and water treatment plants are passed along to ratepayers, and are continuing to increase. The solution is simple: "No wipes in the pipes."

PFAS - OVERVIEW AND LEGISLATION

New Hampshire is suing eight companies for damage it says has been caused statewide by a class of potentially toxic chemicals found in everything from pizza boxes to fast-food wrappers. This is not the first lawsuit targeting the Per- and Polyfluoroalkyl Substances (PFAS) class of man-made chemicals developed in the 1940s. Due to their ability to repel grease and water, they have been used in many industries for stain prevention, non-stick coatings, food packaging, clothing, and furniture. The greatest concern involves military bases, fire departments, and airports related to the chemicals in firefighting foam used to extinguish petroleum fires, which leaves PFAS chemicals in close proximity to public drinking water sources.

Studies have found potential links between high levels of perfluorooctanoic acid (PFOA) in the body and a range of significant medical conditions. Water utilities need to stay informed on state and local guidelines and regulations as they relate to PFAS and educate themselves on PFAS and available technologies for dealing with these chemicals.

In the West, PFAS contamination has been confirmed in water supplies in Alaska, Arizona, California, Colorado, Idaho, New Mexico, Oregon, Utah, Washington, and Wyoming.

Municipalization of Water and **Wastewater Utility**

City of Blue Mound, Texas

In addition to our experience with the municipalization of electric utilities, NewGen has also been involved in the municipalization of water and wastewater utilities as well. For example, NewGen assisted the City of Blue Mound, Texas in acquiring the water and wastewater assets within the City, which were previously owned by Southwest Water Company. As part of this effort, members of NewGen performed valuation analyses concerning the assets in question, and provided assistance to the City in the negotiation and final acquisition of the system. In addition, NewGen assisted the City in preparing and supporting the required Sale, Transfer, or Merger regulatory filing before the Public Utility Commission of Texas needed for the City to obtain the Certificate of Convenience and Necessity to provide service. Since acquisition in late 2015, the City has been able to maintain water and wastewater rates at levels lower than the prior provider and has made substantial capital improvements to the systems, providing more reliable and affordable service to the community.

TEXAS WATER SUPPLY STRUGGLE

Water experts are trying to determine how "resilient" the state's water infrastructure is in keeping safe drinking water flowing through the taps. There are indications that the system is more fragile than once thought - after Hurricane Harvey in 2017, more than 200 public water systems shut down or warned customers to boil their tap water. Months later, 3,700 Texans still lacked access to safe drinking water. In 2013, 30 towns in 2013 were within 6 months of running out of water as a drought continued to grip the state.

With the state population expected to double by 2050 to more than 50 million people, plans for a long-term water strategy face ever increasing challenges including infrastructure defined by aging water lines, outdated treatment plants, and smaller utilities focused on their own interests rather than regional ones. In 2002, Texas was lagging by 2.4 million acre feet in meeting water demands at the height of severe drought, and now the state is 4.7 million acre feet behind. The Texas Water

Development Board, which coordinates water planning and strategy, recently altered its approach by no longer basing long-term strategy on political or city boundaries, according to Temple McKinnon, its Director of Water Use, Projections and Planning. The

focus now is on the needs and projections of water providers. Providers must cobble together the money necessary to deliver a plentiful amount of safe, potable waterthrough conservation programs, groundwater and surface water supplies, reservoirs, water reuse, and other means.

An acre foot amounts to 1 foot (0.3 meter) of water across an acre of land (or 325,851 gallons).



PAPER AND PLASTIC MARKETS -**STATUS UPDATE**

The impact of tariffs, import restrictions, and domestic market volatility have all resulted in an increasingly volatile market for those that are trying to manage and sustain recycling programs - whether operated by cities or the private sector. These uncertainties have created greater financial pressure on the operating margins for these programs. Proof of this volatility is cited by Dylan de Thomas of the Recycling Partnership, who said recently that the blended value of a ton of a residential recyclables was just over \$35 in March 2019, which compares to two recent projects completed by NewGen that showed a blended ton worth approximately \$75 to \$85 only 12 -18 months ago.

However, despite the doom and gloom, there are some positive things occurring within the recycling marketplace. De Thomas recently stated that there is approximately \$400 million in capital projects currently being planned and constructed in the U.S. that will consume 350,000 tons of recycled plastics annually – high-density polyethylene (HDPE), low-density polyethylene (LDPE), and others. On the recycled fiber (i.e. mixed paper, cardboard) side, it is estimated that nearly \$2.5 billion in capital projects are being planned. These projects are estimated to consume over 5 million tons of recycled fiber annually once they are all fully operational. Most of these facilities



are estimated to come on-line in 2020, 2021, and beyond. It is estimated that commodity prices should hopefully start moving upward in approximately 12 – 18 months. Stay tuned!

TWO NEW PAPER MILLS ANNOUNCED IN **UTAH AND NEW YORK**

Crossroads Paper announced that it will construct a recycled-paper mill in Utah. It is expected to open in early 2022 and will produce 1,000 tons of packing paper daily. It will solely utilize 100% recycled fiber from cardboard boxes and waste paper. The mill will use only 10% of the normal water consumption of a mill its size due to a water treatment plant that it will operate on site to clean its water both before and after its use.

In late May CorrVentures, LLC announced it will build a 300,000 ton per year lightweight containerboard mill near Albany, New York. It will use 100% recycled content material to produce its finished product. The mill will consume 330,000 to 350,000 tons per year of recycled fiber from postindustrial generators of old corrugated containers (OCC), as well as OCC from a materials recovery facility.

STOCKHOLDERS AGREE TO WASTE MANAGEMENT / ADVANCED DISPOSAL **SERVICES MERGER**

Advanced Disposal Services (Advanced) shareholders voted on June 28, 2019 to accept the \$4.9 billion merger agreement offered by Waste Management, Inc. (WMI). This merger agreement will make WMI, currently the largest garbage and recycling company in North America, even larger. Advanced is headquartered in Ponte Vedra, Florida, while WMI is headquartered in Houston, Texas.

Commercial Collection Feasibility Analysis

City of Victoria, Texas

NewGen has been involved in municipalization feasibility studies for solid waste entities, in addition to our energy and water/wastewater municipalization experience. In the spring of 2019, NewGen was retained to assist the City of Victoria (City) to determine whether it was financially feasible for the City to take over commercial front load collection within the City when Waste Management's contract with the City expires in 2021. Waste Management provides 100% of the commercial front load and roll-off collection services within the City to all businesses, governmental buildings, etc. The City currently provides solid waste and recycling collection services to residential customers, so from an "economies of scale" standpoint there are certain financial and operational advantages to the City also providing commercial front load collection services.

Based on the findings of the Study, which was completed in August 2019, the City is planning to issue a Request for Proposal (RFP) for commercial front load collection services (and possibly other services) by the private sector. The proposals will then be compared with what it is estimated to cost the City to provide the same services with City crews. Upon completion of this analysis, a final decision will then be arrived at by City staff, with a series of recommendations provided to the City Council for consideration.



2019 Texas Recycling Summit (10/7 - 10/9)

Hosted by the State of Texas Alliance for Recycling (STAR)

NewGen is a Silver Sponsor of the 2019 Texas Recycling Summit and will have a booth in the exhibitor hall. Please stop by and say hello to Dave Yanke and other NewGen attendees.

Mr. Yanke will be presenting Monday at the National Recycling Coalition (NRC) Workshop on a panel titled Data Collection, Communication, and Funding for Market Development.

2019 TML Annual Conference & Exhibition (10/9 - 10/11)

Hosted by the Texas Municipal League (TML)

NewGen will be in attendance at the 2019 TML Annual Conference in San Antonio, Texas.

TWCA Fall Meeting (10/16 - 10/18)

Hosted by Texas Water Conservation Association (TWCA)

NewGen is a sponsor and will be in attendance at the TWCA Fall Meeting in San Antonio, Texas.

2019 ICMA Annual Conference (10/20 - 10/23)

Hosted by ICMA

Matthew Garrett will be in attendance at the ICMA Annual Conference in Nashville, Tennessee.

WASTECON 2019 (10/21 - 10/24)

Hosted by Solid Waste Association of North America (SWANA)

Allison Trulock and Dave Yanke will be in attendance at WASTECON 2019 in Phoenix, Arizona.

GFOAT Fall Conference (11/6 - 11/8)

Hosted by Government Finance Officers Association of Texas (GFOAT)

NewGen will be in attendance at the GFOAT Fall Conference in Arlington, Texas and will present on enterprise fund financial planning and rate setting.

Public Power Forward Summit (11/21 - 11/22)

Hosted by American Public Power Association (APPA)

NewGen will be in attendance at the APPA Public Power Forward Summit in Nashville, Tennessee.





Ed Donahue Director & Vice President -Water/Wastewater

Ed joined NewGen from MFSG and has almost 50 years of experience, including 40 years of management consulting. Much of his career was spent leading a specialized consulting practice focusing on financial, management and economic issues facing public sector and infrastructure clients, especially those involved in large capitalintense activities.



Natalie Accardo Senior Consultant

Natalie joined the firm as a Senior Consultant in April 2019 and provides financial modeling, large data manipulation, and financial analysis services to our clients. She has a PhD in Earth and Environmental Sciences and M.A. in Earth and Environmental Sciences from Columbia University's Graduate School of Arts & Sciences.



Eric Callocchia Executive Consultant

Bringing more than nine years of experience, Eric joined NewGen from MFSG and is an expert in the financial management of environmental utilities, specializing in cost of service rate studies for water, sewer, stormwater, and solid waste utilities. His expertise includes rate design, scenario analysis, dynamic cash flow modeling and benchmarking evaluations.



Charlie Kassis Staff Consultant

Charlie joined NewGen from MFSG and provides analytical support and assists in the development of financial models and management studies, working primarily with water, wastewater, stormwater, and solid waste utility clients. He has been involved in cost of service and rate design analysis, management and operational assessments, and data analytics.



Mike Maker **Executive Consultant**

Mike joined NewGen from MFSG and leads financial and management studies for water, wastewater, stormwater and solid waste utility clients. His areas of expertise include cost of service and rate design analysis, financial and data modeling, management and operational assessment, and benchmarking and performance measurement.



Nick Short Analyst

Nick joined NewGen from MFSG and assists in data entry and data analysis for water, wastewater, stormwater, and solid waste rate studies. He recently graduated from Towson University with a degree in Economics and a minor in Business Administration.



Reagan Stuart Analyst

Reagan joined NewGen as an Analyst in May 2019 and assists on water, wastewater, and solid waste cost of service and rate design studies. He has a BBA in Finance from the University of Texas.



Richard Scarino Office Manager

Richard joined NewGen from MFSG and is the Office Manager supporting our Annapolis office.