

NewGen *NEWS*

ISSUE 10, AUGUST 2018



Feature Article: **Commodity Markets for** **Recyclables:** **So, What's The Good** **News?**



The markets for recyclable materials are undergoing a noticeable change in the United States (U.S.) and around the world. At different times since the early 1990's, when curbside recycling programs began to become commonplace, recycling programs were making enough money from the sale of commodities to somewhat offset the cost to collect, process, and ship materials to market – this is not one of those times. To some extent, the decline in revenues can be attributed to policy changes in China. Since 2013, and more intensely in the past two years, China has imposed bans and stringent contamination restrictions on importing recyclable materials, which has resulted in turmoil in the U.S. recycling industry. In July 2017, China notified the World Trade Organization (WTO) of its intention to prohibit the import of certain recyclables and scrap into their country, including mixed paper and mixed plastics, beginning on January 1, 2018. China also announced a new, and exceedingly stringent, contamination standard applicable to recyclable imports (0.5%). China banned 24 types of materials last year and will add 32 more to that list by 2019. Those policies resulted in commodity prices dropping nationwide, while raising the cost to process recyclables to meet more stringent limits of contamination. This shift has occurred across all export-based recyclable materials including:

- paper
- plastics
- metals / precious metals
- some textiles

China is the largest export market for recyclables generated in the U.S., previously importing approximately 13 million tons of paper and 776,000 tons of plastic from the U.S. annually.

Other issues outside of the control of the recycling industry also impact commodity pricing, such as tariffs, or the threat of tariffs, which can improve pricing for certain items like metals for domestic consumption. However, analyzing the history of market prices does not accurately depict the future of the market. Many factors come into play when looking at market prices. The market price of a commodity is very dependent on the quality of the material, meaning contamination rates are important drivers for commodity prices. Research has also shown that oil prices correlate with the value of recyclables, most directly plastics but also as it relates to transportation of other materials.

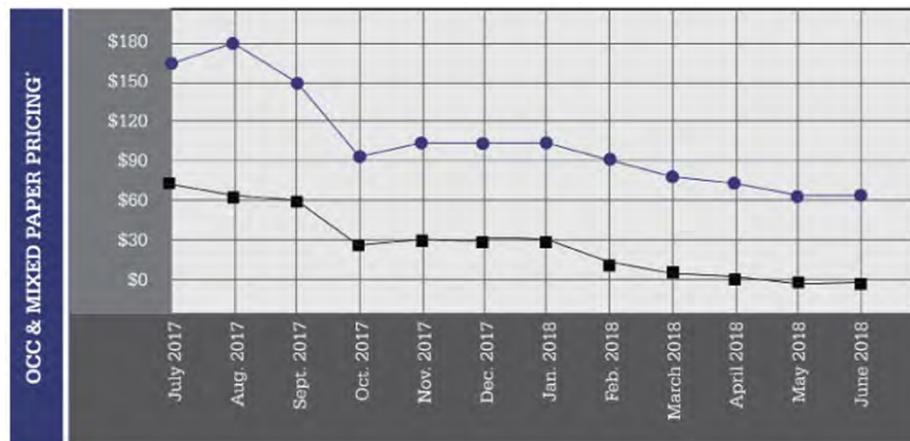


In This Issue

- Feature Article: The State of Recycling.....p.1
- Energy Insights.....p.4
- Water, Wastewater & Stormwater Insights.....p.5
- Solid Waste & Recycling Insights.....p.5
- NewGen New Hires.....p.6
- Conferences and Seminars.....p.7
- NewGen Event – Client Reception*.....p.7

Feature Article cont.

The market for recyclables for many commodities has been on a gradual decline since 2017. For example, as shown in the following figure, pricing for old corrugated cardboard (OCC) went from \$180 per short ton in August 2017 down to \$90 per short ton in October 2017, with the declining pricing trend continuing thus far in 2018.



Purple circles: OCC. Black squares, mixed paper (54). Average U.S. dollars per short ton for open market purchases by mills for delivery in June as reported by RISI's *PPW Yellow Sheet* June 6, 2018. Prices used with permission from *PPW Yellow Sheet*. Free trial available: www.risi.com/rt.

Market pricing is constantly changing and can be affected by many different factors and in different ways, depending on the region. Listed below are examples of the impact that China's actions are having on recycling programs within the U.S., and some of the actions that cities are taking to keep their recycling programs sustainable, specifically focusing on the southwest and the southeast regions of the U.S.

SOUTHWESTERN UNITED STATES

Like many parts of the U.S., the southwest has felt the pain that has been inflicted by declining commodity prices for recyclables due to the recent actions of China. One example that highlights some of the challenges faced by municipalities involves a recycling company that serves municipalities in Texas and New Mexico. Friedman Recycling (Friedman) operates material recovery facilities (MRFs) in both Albuquerque and El Paso.¹ Due to the stricter contamination requirements implemented by China, Friedman had to slow its processing lines and add a second shift at its Albuquerque MRF. As a result of these increased processing costs, Friedman requested an increase of over 30% in its current processing fee from the communities using the MRF in New Mexico.

Another result of the declining commodity prices is an increased awareness of the need to reduce the contamination (i.e., residuals) that is left after a MRF sorts and collects all of the recyclables that can be sold. Oftentimes, MRFs across the U.S. will find that anywhere from 20% to 30% of the material that comes into the MRF in the recycling truck needs to be taken to the landfill because it is not recyclable. Examples include garden hoses, dry cleaning bags, car batteries, etc. As a result, some cities are working to reduce the level of contamination residents place in their recyclables containers. The goal is to educate the citizens about what can and cannot be recycled. For instance, El Paso has started a program titled "Tug Tip Turn and Tag," which involves manually checking the residents' recycling containers. The city is selecting certain neighborhoods to inspect and make sure the containers only have recyclables. If it has tree trimmings, rocks, etc., the inspector will turn the container, so it isn't collected, and tag and circle the reason why it was not picked up. Repeat offenders can lose their blue bin altogether.



1. A MRF is a highly mechanized facility where recyclables are processed after being collected by municipal recycling programs – either from curbside collection programs or recycling drop-off centers. In a MRF, the materials are sorted through a combination of both automated and manual processes. The materials are then baled by type of material – OCC, mixed paper, aluminum, plastics # 1 – 7, etc.

Feature Article cont.

At a May 2018 Rockport, Texas City Council Workshop, the Republic Services (Republic) representative talked about the impact of China's recent actions on the market for recyclables. The Republic representative described that in the summer of 2017 Republic was able to get \$97.50 per ton for mixed paper, but now can only get \$5 per ton. The representative asked the city council to consider a temporary rate increase from \$0.27 to \$0.30 per household per month to cover the shortfall.

The City of Tucson, Arizona was proactive several years ago when commodity prices dropped nearly 80% over a three-year period. As a result, they negotiated an increase in the processing fee for the MRF operator, along with a larger revenue share for the city. The city council also approved a \$0.45 per month recycling surcharge to the residential trash bills, which is adjusted quarterly like a fuel charge, dependent upon the status of the commodity markets.

SOUTHEASTERN UNITED STATES

Local governments with expiring processing agreements with private processors are facing the realities of potential changes in revenue share arrangements, the cost to process, and the burden of reducing contamination. In Florida, prompted by recyclables processors, during the 120th State legislative session, the State Legislature passed legislation that would place much of the burden of reducing contamination on the local governments. Specific language in House Bill 1149 would have required counties and municipalities to address the contamination of recyclable materials in contracts for collection, transportation, and processing of residential recyclables by requiring local governments to detail how the local government would work to reduce contamination and allowed for haulers and processors to reject contaminated loads. In April 2018, the Governor of Florida vetoed the bill; however, the issue of contamination, who is responsible for minimizing, and what recourse for contamination is allowed, is likely to be revisited in the next State legislative session.



According to a July 2018 article in the *Charlotte Observer* (Charlotte, North Carolina) written by Steve Harrison, "Last month, the City of Lincolnton near Charlotte stopped its recycling program, and residents began throwing their glass, plastic bottles and cardboard into their garbage." The article also describes the challenges facing Mecklenburg County, and its processor, Republic, where there have been instances of giving away bales of plastics and mixed paper, or even paying to get rid of the bales. In a part of the country where landfill tipping fees are often nearly as low as \$30 per ton, rising processing costs are making the economics of recycling programs harder to manage for local governments.

In July 2018, a Recycling Workshop for the Tampa Bay Region, facilitated by NewGen staff, was held. The attendees of the workshop were recycling stakeholders in the Tampa Bay Region including local governments, private haulers, private processors, and local universities. The purpose of the workshop was to bring together different perspectives on recycling in the region, given the challenges facing the recycling industry today, and allow attendees to share concerns, issues, and potential opportunities for solutions and cooperation. The workshop resulted in identifying action items and committees to be formed to keep the public and private sector attendees working together toward solutions for the region. Three committees were formed: contract transparency with processors, enforcement strategies, and glass recycling opportunities.

AND THE GOOD NEWS IS...

The Solid Waste Association of North America (SWANA) has focused efforts on China's waste import restrictions, providing updates to members, engaging in advocacy efforts for the North American recycling industry, and developing and sharing tools like media kits and downloadable infographics. In April 2018, SWANA, along with other organizations, sent a letter to congressional leadership urging that recycling be considered in any infrastructure package.

The recyclables commodities markets have always been, and will likely always be, volatile. A renewed focus on domestic reclamation could be beneficial in the long-run. We are seeing some signs of increased interest domestically to capture the recyclable materials here in the U.S. For example, read in the "Solid Waste and Recycling Insights" section of NewGen News about Green Bay Packaging's \$500 million investment in a new paper mill. Another company that is benefiting and growing in this uncertain time is Trex Company, Inc as it continues to manufacture decking, furniture, etc. from wood alternative materials – primarily recycled plastics

Feature Article cont.

– which with depressed prices has significantly reduced its operating costs.

According to a January 2018 post on the *Resource Recycling* website, <http://Resource-Recycling.com>, by Colin Staub, the China Scrap Plastics Association “is looking at investment opportunities in processing within countries that have sent their recyclables to China in the past...and will be looking at investment opportunities for processing within the U.S.” The *Plastics Recycling Update*, a publication of Resource Recycling, Inc., reported in April 2018 that a Chinese processor announced its plans to open a recycling operation in Orangeburg, South Carolina.

For local governments, communication with elected officials is crucial. NewGen has found that those solid waste and recycling managers that are proactively updating their elected officials on the status of the commodities markets, how the staff are responding to the challenges, and quantifying the financial results are the most successful in getting changes to their programs approved so they can continue to be successful at achieving their mission in a difficult and dynamic market.

Authors/Points of Contact:

Austin, TX Office: Dave Yanke (dyanke@newgenstrategies.net)

Orlando, FL Office: Allison Trulock (atrulock@newgenstrategies.net)



ENERGY INSIGHTS

Xcel Energy Terminates Mountain West Transmission Group Participation

At the end of April 2018, Xcel Energy (Xcel) terminated its participation in the Mountain West Transmission Group (MWTG), which sought to create a wholesale transmission market in the Mountain West. MWTG (made up of Colorado Springs Utilities, Platte River Power Authority, Xcel, WAPA, and Black Hills Energy) had recently come to an agreement with the Southwest Power Pool (SPP) for operating the new western regional transmission organization (RTO) market. Xcel noted concerns with signing transmission agreements with the MWTG participants prior to commissions and regulators approving the RTO in its decision to terminate its participation in the group. While Xcel no longer participates in the group, officially the MWTG continues and there is still support from the remaining members to develop a market and/or integrate their systems with SPP, or others, to improve the reliability and efficient flow of energy in the West. In addition, the California Independent System Operator (CAISO) continues the pursuit of expanding its footprint and recent success in its energy imbalance market expansion. The MWTG was, in some ways, a response to CAISO's expansion in the Mountain West; this may allow CAISO another opportunity at expansion and pursuit of improved flow of conventional and renewable energy in and out of California.

Western U.S. Fire Season Impacts Reliability and Market Prices in California

While the wildfire season is a common issue and concern for Western U.S. electric utilities, it rarely has such a dramatic impact to power and transmission markets. With several fires currently ablaze in California, the expansive Carr Fire (229,651 acres burned and 96% contained, at the time of NewGen's newsletter publication) has further devastated communities and adversely impacted utility system performance. Grid instability, unavailable transmission capacity, and sporadic outages have impacted hydropower generation availability throughout the northern California region. Multiple transmission lines throughout the region were significantly damaged and out of service for multiple days. Additionally, several hydropower generation facilities were also off-line due to the threat of the fires or limits on transmission capacity. This resulted in dramatic spikes in CAISO nodes affected by the fires, with prices spiking periodically up to 20 or more times the recent average rates for energy.

ENERGY PROJECT HIGHLIGHT

Exelon Corporation-Federal Energy Regulatory Commission Proposal Analysis and Support New England States Committee on Electricity

NewGen is currently supporting New England States Committee on Electricity (NESCOE) to review the Cost of Service (COS) Agreement filed with the Federal Energy Regulatory Commission (FERC), which provides the terms and conditions for the continued operation of the Mystic 8 & 9 generating units near the Everett Marine Liquefied Natural Gas (LNG) Terminal (Everett). Exelon Corporation (Exelon) is requesting additional compensation above market power rates

Energy Insights cont.

to maintain operations at two generators within ISO New England (ISO-NE). NESCOE represents the collective perspective of the six New England states in electricity matters and advances the common interest of maintaining low cost power, reliable service, and environmental quality.

NewGen evaluated the terms, assumptions, and projections to render an opinion of the just and reasonableness of the costs and if the rates in the Agreement are adequately supported. The Agreement includes recovery of the actual monthly fuel supply costs incurred at the Everett facility, which is the sole source of fuel for Mystic 8 & 9. NewGen evaluated and compared the COS Agreement to industry values, practices, and reasonableness regarding cost allocations, rate design, development of the revenue requirement, and supporting calculations. Initial issues were identified in the filing and Agreement regarding specific items that could not be conclusively determined to be just and reasonable due to the lack of supporting data provided in the filing. The filing and project is on-going and may result in additional assistance to NESCOE with Exelon settlement negotiations, additional analyses, and/or development of testimony before FERC.



WIFIA Funding Deadline

July 31st marked the deadline for utilities to submit letters of interest for the Environmental Protection Agency's (EPA) 2018 round of Water Infrastructure Finance and Innovation Act (WIFIA) funding. This year, the EPA made \$5.5 billion available via a competitive process, with the selection process continuing into the fall of 2018. The WIFIA program is intended to serve an important role in meeting the over \$743 billion estimated funding needed for critical water infrastructure improvements nationwide.

Average Price of Water Increasing

According to a June study published by Circle of Blue, an average residential family experienced a 3.3% increase in the cost of water year-over-year. As reported, this is the smallest annual increase experienced since 2010. The highest increase in the survey was the City of San Jose at 17.8%, while Austin, Texas lowered its overall rates in opposition to the national trend.

Cape Town, South Africa to Look at Easing Restrictions

After coming within days of running out of water, the Department of Water and Sanitation of Cape Town, South Africa is looking at potentially easing water restrictions. Currently, each person in Cape Town is limited to 50 litres (or less than 14 gallons) of water a day. For comparison, it is estimated that the average person in the United States uses between 80 and 100 gallons of water a day.

WATER, WASTEWATER, AND STORMWATER PROJECT HIGHLIGHT

Affordability Study Austin Water

After completing our work as the residential rate advocate for Austin Water's water, reclaimed water, and wastewater cost of service and rate design study, NewGen was hired to assist Austin Water in completing an affordability benchmarking study requested by the Austin City Council. The benchmarking study compares Austin Water with other similar utilities across the state and country. The study evaluates the contextual qualities of the various utilities that may contribute to differences in cost structure, such as source of water and treatment processes, as well as quantitative comparisons of costs and bills. Different benchmarks were developed and evaluated to provide multiple assessments of affordability, and the advantages and disadvantages of each benchmark were described. Recommendations were made regarding which benchmarks were optimal to update on a recurring basis to provide routine reporting to city council.



Waste Management's Recycling Revenues Continue to Decline

Waste Management (WM) reported its second quarter results for the quarter ended June 30, 2018. Jim Fish, president and CEO of WM, said "Our traditional solid waste business continued to perform exceptionally well in the second quarter, underpinning our strong financial results." Revenues and net income were both up for the second quarter. However, recycling continued to struggle with average recycling commodity prices at

Solid Waste and Recycling Insights cont.

the company's facilities approximately 43% lower in the second quarter of 2018 compared to the prior year.

Additional News Regarding China's Ban on Recyclables...

The Chinese government continues to release updates on its on-going effort to curb imports of recyclables, including a plan to ban all recycling material imports by 2020. This is to be coordinated with a plan to increase China's domestic collection and processing of Chinese-generated waste and recyclables within China.

Chinese buyers in May imported the least amount of recovered paper in any month this year. According to the Chinese General Administration of Customs (GAC), the country imported 860,000 metric tons of recovered paper in May. That was down significantly from the prior four months in 2018 when 1.1 million to 1.4 million tons was imported each month.

As further proof of the disruption to the recycling markets with China's ban on recyclables, in a recent webinar sponsored by SWANA, WM's federal affairs director, Susan Robinson said that in 2017 nearly a third of WM's fiber was exported to China, and in the first quarter of 2018 that figure had dropped to 5%. She added that in May 2018, WM did not ship any fiber to China. She also mentioned that as a result of these pressures, the blended value of a ton of recyclables at a single-stream MRF has dropped by almost 50% in value since 2017.

Major Midwest Mill to Build a \$500M Paper Mill

Green Bay Packaging (GBP) will build a \$500 million paper mill that will use 100% recycled content sourced from OCC and mixed paper. The facility will be built in Green Bay, Wisconsin and replace the company's existing 71-year-old facility. The facility will produce containerboard and be the first new mill in Wisconsin in over 30 years. The new mill will have a production capacity of 685,000 tons per year, up from the current facility's capacity of 240,000 tons per year. The facility has had recycled content in its fiber mix since 1957, with it increasing to 50% by the late 1980s and up to 100% since then.

SOLID WASTE AND RECYCLING PROJECT HIGHLIGHT

Thirty-year Solid Waste Master Plan Pinellas County, Florida

As part of a larger project team, NewGen was retained by Pinellas County (County) to assist with the development of a 30-year solid waste master plan. The County has developed one of the most advanced solid waste management systems in the U.S., combining various methods of reducing, recycling,

composting, and treating and disposing of waste for an efficient, cost-effective, and environmentally sound waste management program. Florida set a statewide goal of 75% recycling and diversion by 2020 for each county in the State to reach. For the past two years, Pinellas County ranked the highest, or tied for the highest, recycling rate in Florida—a testament to the dedicated work of County staff to ensure that the programs and infrastructure needed to meet the State's aggressive goals are in place. For the past three years, the County's traditional recycling rate has been over 50%, and with the State's calculation to adjust recycling rates to account for renewable energy production, the County's adjusted recycling rate has been over 80% for the past three years. The County recognizes now is the right time to examine what the next generation of the Pinellas County solid waste management system will look like, to identify what programmatic changes, modifications to existing infrastructure, and what new assets are needed to bring Pinellas County to the next level.

The NewGen team's extensive background in strategic and master planning allows us to assist in guiding the County through a forward-thinking yet realistic planning process, applying a triple bottom line approach to evaluation, to identify and plan for the new policies, programs, and infrastructure necessary to reach the County's solid waste management goals.



NEWGEN NEW HIRES

Megan Kirkland, Staff Consultant (Dallas, TX)

Megan Kirkland joined NewGen as a Staff Consultant in May. Megan graduated from Texas A&M University with a major in Petroleum Engineering and a minor in Business Administration, and has previous experience as an Accounting Contractor. Megan is supporting NewGen with analytical efforts and industry/project research.

Paul Sommerdorf, Analyst (Austin, TX)

NewGen welcomed Paul Sommerdorf to our team in June. Paul joins us as an Analyst and has recently graduated from the University of Texas at Austin with a B.B.A. in Management Information Systems.

NewGen New Hires cont.

Ben Wheatall, Analyst (Lakewood, CO)

Ben Wheatall joined the firm as an Analyst in August. Ben recently graduated from the Colorado School of Mines with a M.S. in Engineering and Technology Management. He received his B.S. in Petroleum Engineering from Penn State. Ben is assisting with various cost of service and rate design projects, with an emphasis on data-driven analytics.



CONFERENCES AND SEMINARS

APPA 2018 Business & Financial Conference (September 16-19, 2018)

Hosted by the American Public Power Association (APPA)

NewGen is a Silver Sponsor of the APPA 2018 Business & Financial Conference being held in Anaheim, California.

Additionally, Scott Burnham and Andy Reger will lead a breakout session with Riverside Public Utilities on *Pricing & Market Analysis - Flex Your Rate Muscles, Shape Your Load*. This session highlights how thoughtfully designed rate structures can send price signals to change customer behaviors in consuming electricity or adopting distributed energy resources. Please join us to review various rate design options and how they could impact load patterns.

New Mexico Recycling and Solid Waste Conference – Local Actions for Global Markets (September 24-26, 2018)

Hosted by the New Mexico Recycling Coalition & SWANA-NM Roadrunner Chapter

NewGen is a sponsor and exhibitor at the New Mexico Recycling and Solid Waste Conference in Albuquerque, New Mexico. Dave Yanke, President of NewGen's Environmental Practice, will be speaking during the Wednesday, September 26th lunch session addressing *Solid Waste Asset Management – Critical Assets, Capital Improvement Plans, and Rates*.

Come by Booth #14 and introduce yourself to Dave or Stephanie Crain (Senior Consultant in Austin, TX)!

2018 TML Annual Conference and Exhibition (October 10-12, 2018)

Hosted by Texas Municipal League (TML)

NewGen staff will be attending and have a booth in the Exhibit Hall at the upcoming TML Annual Conference in Ft. Worth, Texas. Come see us at Booth #722!

GFOAT Fall Conference (October 24-26, 2018)

Hosted by Government Finance Officers Association of Texas (GFOAT)

NewGen staff will be in attendance at the GFOAT Fall Conference in Galveston, Texas.

Texas Recycling Summit 2018 (October 28-31, 2018)

Hosted by State of Texas Alliance for Recycling (STAR)

NewGen is the Audio/Visual Sponsor and will be an exhibitor at the STAR – Texas Recycling Summit 2018 in Galveston, Texas.

Don't miss the session on Tuesday, October 30 at 10:30am, where Dave Yanke will be speaking on *Navigating Market Volatility*. Be sure to stop by our booth and say hi!



NEWGEN EVENT

Join Us at NewGen's Client Reception!

NewGen will be hosting a Client Reception following the pre-conference seminars at the APPA Business & Financial Conference.

Roy's Anaheim

321 W Katella Ave, Anaheim, CA 92802

Sunday, September 16, 2018

7:00PM

RSVP to Roscila Spink at rspink@newgenstrategies.net

**NewGen
Strategies & Solutions**

Have a question? Contact us at

info@newgenstrategies.net | www.newgenstrategies.net

Colorado | Florida | Michigan | Tennessee | Texas | Washington