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Landfill space continues to decline



by MAURA KELLER

mkeller@americanrecycler.com

The Arkansas Department of Energy and Environment states that Arkansans generate millions of tons of solid waste each year, with nearly three-fourths going to landfills. While this level of waste deposited in landfills may seem high, Arkansas is simply one of dozens of states who have become dependent on landfills to handle the increasing amount of waste being thrown away each day by Americans.

According to Randy Burns, chief sustainability officer at O-I, the rate at which landfills are being filled is increasing at a rate greater than anticipated 10 years ago with the incredible growth of e-commerce, excess packaging, and an increased consumption of single-use items.

“Clear policies regarding what should and shouldn’t be thrown away are also lacking, so materials that should be recycled are still being taken to landfills,” Burns said. For example, many local governments landfill glass even when consumers separate it out into recycling bins expecting it to be recycled.

As Burns explained, the contribution of glass to this issue has been minimal as it is dense and easily compacted. In fact, many landfills currently use glass as alternate daily cover (ADC) in place of other aggregate, and although this is not the highest and best use of glass – a material that is infinitely recyclable – it does provide a beneficial reuse when used in that manner.

What’s more, single-use plastics in the form of beverage containers, take

out containers, shampoo bottles, detergent bottles and similar items have contributed the most to the increase in waste for a couple of reasons.

“The materials have limited recycling outlets. The only options are to dispose of single-use plastics in a landfill or to use as fuel for waste to energy (WTE) applications,” Burns said. “These types of materials take up volume in a landfill at a greater rate than other substrates.”

It’s important to note that landfill management has become more restrictive over the years, requiring additional controls and monitoring of leachate runoff and methane gas emissions from decomposition to manage one of the most harmful greenhouse gases.

“The permitting process for new landfills has also become more complex and lengthy. A current estimate now is that acquiring a permit for a new landfill may take up to 7 to 10 years, during which time regulations could change, causing increases in cost that are no longer competitive,” Burns said.

As Tommy McCoy, founder of HaulShare explained, another big challenge facing landfills today that weren’t on the radar 10 years ago includes the Chinese government enacting a global ban on the import of low-grade plastics and other related materials.

“Until 2018, the U.S. exported around one-sixth of its recyclable materials to China,” HaulShare said. “This single event led to the dissolution of recycling programs in multiple cities around the country.” HaulShare was founded by McCoy and Abhishek Luthra to fill an underserved niche in

the junk removal industry that was ripe for innovation. At the time, McCoy was working for his parent’s waste management company, Champion Services Inc. He took hundreds of calls from customers asking for a more streamlined junk removal service. That’s when he noticed there was no easy way for residential and commercial customers to have bulk items removed.

As McCoy explained, while emerging technologies have enhanced the safety of landfills, the management of landfills itself hasn’t changed much in recent years. What has changed is the marketing approach.

“In the past, the solution to our waste problem would have been to simply create more landfills,” McCoy said. “Today, managers are taking a more environmentally sound approach. Convincing people to limit the amount of trash they produce. That, to me, is the only viable tool we have to fight our surge in waste.”

Loss of space for landfills is a major concern for cities and states across the country. According to McCoy, landfills take up millions of acres both in the U.S. and abroad. In 2009, there were roughly 30,000 landfills in the U.S. Today, according to the Environmental Protection Agency, the U.S. has just over 3,000 active landfills and over 10,000 old municipal landfills.

“The problem is, the bulk of waste is held at just 2,000 locations – and they are near or at capacity,” McCoy said. “In fact, the U.S. is on pace to run

See **LANDFILL SPACE**, Page A4

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California cities implement new redemption models

Local leaders in San Mateo County, California will expand the number of take back sites for consumers to cash in their empty bottles and cans through a pilot project, as the state explores new models to boost access to recycling California Redemption Value (CRV) bottles and cans.

Local pilot projects offer more flexibility for California communities to innovate new CRV redemption models to fit their specific needs. State law authorizes CalRecycle to approve and provide funding for up to five pilot projects. To date, CalRecycle has approved the following three projects:

San Mateo County – Three additional fixed CRV take-back locations with limited operating hours established within San Mateo County, including one in a more rural area.

San Francisco – Tagged bags of material dropped at collection bins throughout the city. Electronic payments issued with 72 hours after the material is processed.

Culver City – Mobile redemption center alternates between two locations six days a week.

California recycles more than 18 billion beverage containers each year,” CalRecycle acting director Ken DaRosa said. “These local projects are customized to the needs of their communities to provide consumers more convenient redemption opportunities.”

San Mateo County’s regional solution was designed to overcome local challenges like high real estate costs, limited parking, and neighborhood

opposition to new CRV take-back sites. The project uses existing local resources and nontraditional community locations to maximize consumer convenience. The pilot aims to create a more successful model for CRV redemption in the region.

The Beverage Container Recycling Pilot Program, created by Senate Bill 458 (Wiener, Chapter 648, Statutes of 2017), authorizes CalRecycle to approve up to five pilot projects proposed by local jurisdictions to explore innovative, new models for CRV redemption in underserved areas. Assembly Bill 54 (Ting, Chapter 793, Statutes of 2019) made changes to the pilot program to allow for greater flexibility and to provide up to \$5 million in funding for approved projects.

Pilot project start dates vary based on the application approval of pilot project recyclers. Once pilot programs commence, all convenience zones in the program area will be considered served, relieving CRV retailers of their obligation to either redeem containers in-store or pay a \$100 per day fee.

Jurisdictions interested in applying for one of two remaining pilot projects before the approval deadline of January 1, 2022 can find application instructions online.

Californians have recycled more than 400 billion bottles and cans since the inception of the Beverage Container Recycling Program in 1986.

The state’s container recycling rate increased from 52 percent in 1988 to its current rate of 75 percent.

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Landfill space

■Continued from Page 1

out of landfills within 16 years, according to a new report by the Northeast Recovery Association.

Steps Being Taken

There is a myriad of initiatives being erected by landfill managers, environmental groups and the government in terms of addressing these challenges surrounding landfills.

For example, O-I is working to implement a common sense policy that will ban materials like glass from being taken to landfills (policies that already exist in EU countries) in the first place and the company is also looking to change existing policy that considers downcycling of glass for landfill cover as "recycling."

"Additionally, as we have previously, O-I continues to engage with partners like GRC, GPI, GRF and local communities in promoting alternate collection systems for glass that helps prevent glass from going to a landfill," Burns said.

Another example of innovations surrounding landfills includes the process of converting methane into natural gas. The flammability risk of methane is well documented, however, as McCoy said, what makes it uniquely dangerous, is that it is 20 times more effective than carbon dioxide in terms of trapping heat in the atmosphere.

"Research suggests that reducing methane slippage from landfills can dramatically reduce our climate change impact," McCoy said.

Other industries are also taking steps to limit landfill volume by limiting product waste and enhancing certain products' reuse. Michael Barlow is co-founder and chief executive officer of Fernish, a furniture rental service that's working to cut down the 9.8 million tons of furniture that ends up in landfills each year.

According to Barlow, the reality is that furniture is not designed at scale to be recycled. Most furniture pieces are not made of any single material and are not easily disassembled, which are the core challenges.

"A lot of the low-market furniture brands use veneers or chemically-

treated coatings, which are neither recyclable nor compostable," Barlow said. "Also, while typical polyurethane foam used in upholstery does have a commercial use for recycling, many municipalities simply don't take foam – which is another recycling challenge for furniture."

As a result, furniture much more often than not ends up in landfills – and in the U.S. alone almost 10 million tons of furniture goes into landfills annually.

"All of these challenges build to the higher purpose of our company at Fernish, which is to keep low-quality furniture from ever entering circulation," Barlow said. "Our business puts only durable and modular products in the homes of consumers and then we upcycle it through an in-house refurbishment process, supported by a parts-based supply chain"

In order to make a dent in furniture waste not just nationally, but globally, brands like Fernish will need more widespread adoption and to educate consumers around the waste created by the furniture industry. "It's totally doable, but any type of change is typically an uphill battle," Barlow said.

On the Horizon

The future of landfills looks bleak. According to McCoy, we have less than two decades before every active landfill in the U.S. reaches its capacity.

"I also don't see how erecting more landfills fixes our problem or aligns with our country's aggressive sustainability goals," McCoy said.

Burns expects to see glass being banned from landfill applications. "Haulers and others will be disincentivized to put obvious recyclables like glass in landfills themselves and we'll see a broader harmonizing of our waste management and recycling policies to further disincentivize putting recyclables in landfills," Burns said. "At the same time, glass only curbside collection and/or alternate collection systems will become the predominant collection method boosting glass collection in the U.S. to 50 percent by 2030."

SWANA releases report on reducing contamination

The Solid Waste Association of North America's (SWANA) Applied Research Foundation (ARF) has released a new report, Curbside Recycling Collection Options, which presents three curbside recycling options for recycling and sustainability program managers to consider in their efforts to reduce inbound contamination of recyclables and/or recyclables collection costs.

The report presents performance and cost data – as well as case studies – for each of these options. Each option provides a way for communities to achieve cost savings that would more than cover the reduction in revenues caused by the China National Sword policy implemented in 2018.

It is SWANA's expectation that this report will serve as a valuable and timely reference document for solid waste, recycling, and sustainability managers as they evaluate recycling collection options that can significantly reduce costs and/or contamination associated with their current services.

The full report, Curbside Recycling Collection Options, is currently only available to SWANA ARF subscribers. SWANA members receive free access to ARF industry reports one year after publication.

For a direct link to download the executive summary, view this article on www.AmericanRecycler.com.

Events

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www.wastecon.org

March 14th-17th

Southeast Recycling Conference & Tradeshow/SERC. Rosen Centre Hotel, Orlando, Florida.
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March 21st-23rd

2021 C&D World Annual Convention. AT&T Hotel and Conference Center, Austin, Texas.
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American Recycler
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877-777-0043 | Fax 419-931-0740

Owner, Publisher and Editor

ESTHER G. FOURNIER
news@AmericanRecycler.com

Print and Digital Production

MARY E. HILL
mary@AmericanRecycler.com

Marketing Representatives

MARY M. THORNTON
maryt@AmericanRecycler.com

MARY E. HILL
mary@AmericanRecycler.com

Circulation Manager

DONNA L. MCMANUS
donna@AmericanRecycler.com

Writers and Contributors

MAURA KELLER
mkeller@AmericanRecycler.com

RON STURGEON
rons@rdsinvestments.com

MARY M. THORNTON
maryt@AmericanRecycler.com

Production Offices

1789 Indian Wood Circle, Ste 250
Maumee, OH 43537
877-777-0043 fax 419-931-0740
www.AmericanRecycler.com

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Maxtrade fined for illegal imports of off-road vehicles

The U.S. Environmental Protection Agency (EPA) announced a settlement with Maxtrade LLC, a South El Monte-based recreational vehicle importer, for significantly underreporting the number of recreational vehicles it produced and imported. Such inaccurate counting can harm efforts to fight air pollution. The company will pay \$150,000 in civil penalties, a fine that was adjusted after the company demonstrated a limited ability to pay a higher penalty.

“Companies must submit truthful and accurate information to EPA when producing vehicles for the U.S. market,” said EPA Pacific Southwest Regional Administrator John Busterud. “We will continue to hold accountable violators who misrepresent information to the EPA, and thereby hinder our work to protect air quality.”

The Clean Air Act requires all vehicles imported into and sold in the United States to meet federal emission standards to control air pollution. Companies that manufacture and sell vehicles must obtain EPA-issued certificates of conformity (COC) to show their vehicles will meet emissions standards. Any vehicle manufacturer must also submit an application to the EPA that describes the engine or vehicle, its emission control system, and emissions data demonstrating compliance with emission standards. COC holders are required to submit reports to EPA’s Office of Transportation and Air Quality (OTAQ) that include production volume under that COC for each

model year. EPA may void a COC upon finding that the COC holder submitted false or incomplete information to the EPA.

EPA’s investigation stems from a referral by OTAQ. It was found that Maxtrade underreported the number of recreational vehicles it produced and imported between 2014 and 2016 by over 106,000. As a result, EPA retroactively voided many of the COCs for those vehicles in July 2019, making Maxtrade’s importation of more than 83,000 recreational vehicles illegal.

In addition to the settlement above, EPA also announced separate administrative settlement agreements with the following companies:

China Motorparts Import, Inc., a Riverside based company, had imported more than 160 off-road vehicles without valid certificates of conformity by erroneously claiming the imported vehicles were subject to a racing exemption. China Motorparts Import has agreed to pay a \$5,000 civil penalty which was a reduced amount due to financial hardship.

Motor HQ, Inc., a Rosemead based company, imported six uncertified highway motorcycles in January 2020. These six motorcycles are considered uncertified because the precious metal loading inside their catalytic converters deviates significantly from the precious metal loading established in the COC covering these motorcycles. Motor HQ has agreed to pay a \$10,000 civil penalty.

USTMA finds that recycling end-of-life tires has stalled

While tires remain one of the most recycled products in the U.S., end-of-life markets are not keeping pace with the annual generation of scrap tires, a new report released today by the U.S. Tire Manufacturers Association (USTMA) reveals.

The 2019 Scrap Tire Management Report reveals that almost 76 percent of scrap tires were recycled into products, the manufacturing of automotive products and mulch for landscaping and other products, and tire-derived fuel in 2019. This is down from 96 percent in 2013.

“Three decades after we successfully eliminated 94 percent of the over 1 billion scrap tires stockpiled around the country, this report reveals that efforts to find and develop new uses for scrap tires have stalled,” said Anne Forristall Luke, president and chief executive officer of USTMA. “We must take immediate steps to grow new and existing markets to recycle 100 percent of scrap tires. This not only protects our health and the environment – it drives innovation and jobs.”

While the number of scrap tires generated each year grew by almost 7 percent, the total number of scrap tires recycled or reclaimed has not significantly changed since 2017.

The report found that 56 million scrap tires remain in stockpiles within states, half of which, do not have active stockpile cleanup programs.

Michelin, Bridgestone and Continental use recycled carbon black (rCB)

to produce new tires. Michelin also partnered with Scandinavian Enviro Systems to increase end-of-life tire recycling using a pyrolysis process which converts scrap tires to new raw materials. Bridgestone joined with Delta-Energy Group to bring at-scale use of rCB to the tire market, and Continental works with Pyrolyx to help tire manufacturers scale up the production of rCB from scrap tires for use in products ranging from phones to pens.

USTMA urges state regulators and federal law makers as well as recyclers, industry and environmental groups, and academic partners to do more to advance a circular economy. Specifically:

- States must resist the urge to shift scrap tire funds away from their intended purpose: to grow scrap tire reuse and recycle markets, clean-up piles and enforce state laws. USTMA supports reasonable fees on the sale of new tires to manage state programs, like those collected in 35 states.

- New public and private sector investments are needed to create innovation challenges, research the lifecycle impacts of scrap tires in different end use markets, and create a national portal for states to share data.

- State and federal policies should encourage the growth of reuse and recycle markets.

USTMA’s 2019 Scrap Tire Management Report can be found on USTMA’s new sustainability information hub.



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ELECTRONICS

Storage capacity for second life batteries expected to increase through 2030

A report from Guidehouse Insights examines key market trends and policies for second life battery (2LB) technologies, appropriate applications for these technologies, and an overview of the battery reuse and recycling process.

Used EV batteries that are no longer viable for vehicle use can still serve other storage applications. Second life applications for EV batteries have gained more attention as the importance of recycling and repurposing used batteries becomes a focus for many EV and battery manufacturers. Globally, 2LB available capacity is expected to grow at a 75.7 percent compound annual growth rate (CAGR) for battery EV (BEV) batteries and a 61.3 percent CAGR for plug-in hybrid EV (PHEV) batteries by 2030.

“The accelerated adoption of EVs is being celebrated for introducing a significant step toward a clean energy transition by helping to reduce the amount of greenhouse gases (GHG) emitted into the atmosphere,” says Maria Chavez, research analyst with Guidehouse Insights. “Forecasts show growth for 2LB markets in line with the adoption of EVs and demand for

cost-effective energy storage solutions.”

According to the report, storage capacity for 2LBs is expected to increase through 2030 due to the rapid adoption of EVs and the trend toward larger EV battery capacities. Growth for this market is largely driven by commercial stakeholders that are identifying opportunities for second life use throughout the EV battery value chain. Although some policy around second life batteries exists globally, more focus from a regulatory perspective is needed in this market to encourage growth at scale.

The report, Second Life Battery Markets, includes key market trends and policies for 2LB technologies, appropriate applications for these technologies, and an overview of the battery reuse and recycling process. Forecasts show that pricing for second life batteries are anticipated to remain competitive relative to EV first life batteries (1LBs). The largest market globally lies with the regions that are also leading in EV sales, such as Asia Pacific, Europe, and North America.

“The man who stops advertising to save money is like a man who stops a clock to save time.”

—Henry Ford

GPS trackers reveal Dell and Goodwill continue to export waste to developing countries

In its program to routinely monitor U.S. electronics recyclers and takeback programs for illegal and unsustainable toxic waste export practices, the Basel Action Network (BAN) found four of six electronic waste LCDs were exported to a developing country following a donation to the Dell/Goodwill partnership known as Dell Reconnect. The latest export of four monitors, from a Washington D.C. Goodwill store via the global used textile trading company, Whitehouse & Schapiro, LLC, to Guatemala represent the third time BAN has found the Dell/Goodwill Reconnect program exporting e-waste in likely violation of the importing country’s laws and Dell’s own corporate policy. Under the Basel Convention, it is illegal for Guatemala to receive any hazardous wastes such as electronic waste from the U.S.

“The track record of Dell and Goodwill’s ability to enforce their policy and international law has not been a good one,” said Jim Puckett, BAN executive director from Seattle. “One can make claims of caring about an issue, but the proof is in the pudding. This latest finding, after two other instances of such carelessness or disregard, is a great disappointment and should be a call for a rigorous corporate action.”

Export of electronic waste to developing countries has been widely condemned as it is most often used as a means to externalize costs and harm to substandard and highly dangerous scrap operations. China and Thailand and other countries have now banned the importation of electronic waste.

All Reconnect program electronic waste is supposed to go directly to Dell recycling partners and never be exported or sent anywhere else. However, in this case of six broken mercury lamp back-lit LCD computer monitors fitted with GPS trackers that BAN delivered to a Washington DC Goodwill store, never went through the

proper Dell recycling process. Four of the monitors ended up going to Guatemala City, Guatemala and two others to solid waste disposal companies in Maryland.

According to Dell, who BAN contacted following this most recent export event, Goodwill has claimed that the flat screens must have been accidentally put into a bin full of used textiles. The Goodwill of Greater Washington organization stated that they would take two corrective actions — first requiring Whitehouse and Schapiro (the likely exporter) to set aside any found electronics and, secondly they agreed to refresh the training of their employees. For their part, Dell will work with Goodwill Industries International, Inc. to ensure participating Reconnect partners follow proper processes.

In May of 2016 after BAN’s first large scale exercise using GPS trackers to track e-waste in the U.S., BAN published the report Disconnect: Goodwill and Dell Exporting the Public’s E-waste to Developing Countries. The study found six Dell/Goodwill program trackers being exported to developing countries. In June of 2017, BAN subsequently found three more devices deposited at a Dell Reconnect Goodwill store, exported to two developing countries. As a result of that second discovery, Dell agreed to engage with BAN in a GPS tracking project which was announced publicly in a press release by BAN and by Dell and completed in 2018.

BAN continues to use GPS Trackers on a regular basis to ensure downstream due diligence of e-waste movements and makes use of them as a verification tool in their own ethical Electronics Recycling Certification — e-Stewards, supported by industry leaders including Samsung, LG, Vizio, and Sony. Additionally, they offer a commercially available tracking service known as EarthEye.

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PAPER

Sofidel opens its second greenfield plant in the U.S.

Sofidel, a global manufacturer of tissue paper for hygienic and domestic use, announced the formal opening of its second greenfield plant in the U.S., signaling a significant expansion by the company in response to consumer demand.

The 1.8 million sq.ft. production plant is fully operational in Inola, Oklahoma, leveraging one of the U.S. most recently built paper manufacturing facilities, equipped with state-of-the-art technology.

The \$360 million technologically and environmentally advanced plant is Sofidel's second greenfield investment in the U.S.. An integrated facility, with its paper mill that transforms pulp into paper and the converting plant that makes the finished product, it can turn out 120,000 tons of tissue annually.

The Oklahoma manufacturing plant, strategically located about 30 miles east of Tulsa, is among the biggest in the state and stands apart from the rest in the industry with its automated machinery. It produces tissue, paper towels, toilet paper and napkins, mostly for large commercial retailers.

Spread over 240 acres within an industrial park, it employs more than 300 people. The site, which has easy access to highways, air, rail and other key infrastructure, allows capacity to be doubled in a second operational phase that would increase the expected job total to 600.

Sustainability and energy efficiency are key components at the facility, including conical refiners to minimize the energy consumed and pumping systems featuring dry seals that allow the use of recycled water.

Sofidel began the Inola construction in 2018, a project known as greenfield for having an international company establish a new business, building its operations from the ground up.

AF&PA releases updated paper reports for September 2020

The American Forest & Paper Association released its September 2020 U.S. paper reports.

Containerboard

Total Containerboard production in September increased four percent compared to September 2019. It was up four percent when compared to the same nine months of 2019.

- September 2020 production of containerboard for export decreased 12 percent compared to the same month last year; it was up 19 percent year-to-date.

- The containerboard operating rate was 95.9 percent, up 3.7 points from September 2019 and up 2.8 points year-to-date.

- Mill inventories of containerboard at the end of September decreased 67,000 short tons from the previous month and were up 25,000 short tons compared to September 2019.

Printing-Writing Paper Report

According to the report, total printing-writing paper shipments decreased 21 percent in September compared to September 2019. U.S. purchases of total printing-writing papers decreased 20 percent in September compared to the same month last year. Total printing-writing paper inventory levels decreased seven percent when compared to August 2020.

- Uncoated free sheet (UFS) paper shipments decreased 19 percent compared to September 2019 while the inventory level decreased six percent compared to August 2020. UFS imports and exports both decreased compared to August 2019, down 18 percent and 40 percent respectively.

- U.S. purchases of coated free sheet (CFS) papers in September decreased 12 percent compared to last September while the inventory level

decreased 10 percent compared to August 2020. CFS imports and exports both decreased compared to August 2019, down 36 percent and 27 percent respectively.

- Coated mechanical (CM) paper shipments decreased 31 percent compared to September 2019 while the inventory level increased two percent compared to August 2020. CM imports decreased 30 percent while exports increased five percent in August 2020.

- U.S. purchases of uncoated mechanical (UM) papers in September decreased 28 percent compared to last September while the inventory level decreased eight percent compared to August 2020. UM imports and exports both decreased compared to August 2019, down 15 percent and 44 percent respectively.

Boxboard

Total Boxboard production in September decreased six percent compared to September 2019. It was down three percent when compared to the same nine months of 2019. The boxboard operating rate was 88.3 percent, down 3.6 points from September 2019 and down 0.8 points year-to-date.

- Solid Bleached Boxboard production in September decreased 11 percent compared to September 2019. It was down six percent when compared to the same nine months of 2019.

- Recycled Boxboard production in September decreased one percent compared to September 2019. It was down two percent when compared to the same nine months of 2019.

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METALS

Steel imports down 21 percent

U.S. IMPORTS OF FINISHED STEEL MILL PRODUCTS					
BY COUNTRY OF ORIGIN (Thousands of Net Tons)					
Preliminary	OCT 2020	SEP 2020	2020 (annualized)	2019 (12 months)	% Change 2020 Annual vs. 2019
SOUTH KOREA	146	124	1,997	2,576	-22.5%
JAPAN	78	59	798	1,242	-35.7%
GERMANY	67	52	710	1,043	-31.9%
TURKEY	68	7	595	328	-25.7%
TAIWAN	24	58	584	830	81.5%
BRAZIL	34	33	536	534	-29.6%
NETHERLANDS	28	33	391	550	0.4%
CHINA	33	20	382	544	-28.8%
All Others	765	782	10,340	13,405	-22.9%
TOTAL	1,244	1,167	16,334	21,051	-22.4%

Based on preliminary Census Bureau data, the American Iron and Steel Institute (AISI) reported that the U.S. imported a total of 1,300,000 net tons (NT) of steel in August 2020, including 1,188,000 net tons (NT) of finished steel (down 51.9 percent and 13.9 percent, respectively, vs. July final data). Through the first 8 months of 2020, total and finished steel imports are 16,400,000 and 11,211,000 NT, down 20.7 percent and 26.9 percent, respectively, vs. the same period in 2019. Annualized total and finished steel imports in 2020 would be 24.6 and 16.8 million NT, down 11.9 percent and 20.1 percent, respectively, vs. 2019. Finished steel import market share was an estimated 17 percent in

August and is estimated at 19 percent over the first eight months of 2020.

In August the largest volumes of finished steel imports from offshore were from South Korea (112,000 NT, down 29 percent from July final), Japan (55,000 NT, up 9 percent), Germany (50,000 NT, up 8 percent), Turkey (46,000 NT, down 11 percent) and The Netherlands (36,000 NT, down 14 percent). For the first eight months of 2020, the largest offshore suppliers were South Korea (1,394,000 NT, down 26 percent vs. the same period in 2019), Japan (539,000 NT, down 43 percent), Germany (473,000 NT, down 38 percent), Turkey (420,000 NT, up 89 percent) and Taiwan (404,000 NT, down 40 percent)

U.S. DOC issues antidumping duty determinations on common alloy aluminum sheet

The U.S. Department of Commerce announced affirmative preliminary determinations in the antidumping duty investigations of imports of common alloy aluminum sheet (CAAS) from Bahrain, Brazil, Croatia, Egypt, Germany, Greece, India, Indonesia, Italy, Oman, Romania, Serbia, Slovenia, South Africa, South Korea, Spain, Taiwan and Turkey.

This follows recent preliminary affirmative countervailing duty determinations for imports of CAAS from Bahrain, Brazil, India and Turkey.

“The Department’s aluminum sheet investigations constitute the broadest U.S. trade enforcement action in two decades,” said secretary of commerce Wilbur Ross. “We look forward to receiving parties’ comments on the preliminary determinations that aluminum sheet imports from 18 countries have been dumped, and in some cases unfairly subsidized, into the U.S. market.”

Commerce preliminarily determined that exporters have dumped common alloy aluminum sheet in the U.S. at the following rates:

- 4.21 percent for Bahrain
- 49.48 percent to 136.78 percent for Brazil
- 3.22 percent for Croatia
- 10.42 percent for Egypt
- 51.18 percent to 352.71 percent for Germany
- 2.72 percent for Greece
- 0 percent to 47.92 percent for India
- 32.12 percent for Indonesia

- 0 to 29.13 percent for Italy
- 3.53 percent for Oman
- 12.51 percent to 83.94 percent for Romania
- 11.24 percent to 25.84 percent for Serbia
- 4.80 percent for Slovenia
- 8.98 percent for South Africa
- 5.04 percent for South Korea
- 3.75 percent to 23.32 percent for Spain
- 18.02 percent for Taiwan
- 12.71 percent to 12.90 percent for Turkey

As a result of these decisions, Commerce will instruct U.S. Customs and Border Protection to collect cash deposits from importers of common alloy aluminum sheet from the above-named countries based on the preliminary rates noted above.

The petitioners are the Aluminum Association Common Alloy Aluminum Sheet Trade Enforcement Working Group and its individual members, Aleris Rolled Products, Inc. (Virginia), Arconic, Inc. (Pennsylvania), Constellium Rolled Products Ravenswood, LLC (West Virginia), JW Aluminum Company (Pennsylvania), Novelis Corporation (Georgia) and Texarkana Aluminum, Inc. (Texas). Commerce is scheduled to announce its final determinations in these cases on or about February 22, 2021.

If Commerce’s final determinations are affirmative, the U.S. International Trade Commission will be scheduled to make its final injury determination by April 5, 2021.

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AR Scrap Metals MarketWatch

Commodity		Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
#1 Bushelings	per gross ton	\$259.00	252.00	254.00	264.00	322.00
#1 Bundles	per gross ton	245.00	260.00	234.00	260.00	284.00
Plate and Structural	per gross ton	260.00	245.00	245.00	255.00	295.00
#1 & 2 Mixed Steel	per gross ton	174.00	241.00	225.00	249.00	265.00
Shredder Bundles (tin)	per gross ton	124.00	130.00	163.00	148.00	136.00
Crushed Auto Bodies	per gross ton	124.00	130.00	163.00	148.00	136.00
Steel Turnings	per gross ton	85.00	89.00	86.00	131.00	150.00
#1 Copper	per pound	2.75	2.60	2.63	2.84	2.72
#2 Copper	per pound	2.62	2.50	2.52	2.65	2.54
Aluminum Cans	per pound	.45	.47	.48	.51	.51
Auto Radiators	per pound	1.39	1.32	1.55	1.51	1.53
Aluminum Core Radiators	per pound	.48	.45	.43	.42	.47
Heater Cores	per pound	1.02	1.00	1.06	1.03	1.39
Stainless Steel	per pound	.51	.51	.53	.52	.51

All prices are expressed in USD. Printed as a reader service only.

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METALS

Worldsteel short range outlook through 2021 updated

The World Steel Association (worldsteel) released an update to its Short Range Outlook (SRO) for 2020 and 2021. This SRO is showing a much more optimistic outlook than the previous SRO finalized in June. While still showing a decline in demand for 2020, it is a much smaller decline than previously expected.

In 2020 worldsteel forecasts that steel demand will contract by -2.4 percent, dropping to 1,725.1 Mt due to the COVID-19 pandemic. In 2021 steel demand is expected to recover to 1,795.1 Mt, an increase of 4.1 percent over 2020. A strong recovery in China will mitigate the reduction in global steel demand this year. The post lockdown recovery in steel demand in the rest of the world has been stronger than was earlier expected, but it still marks a deep contraction in 2020, both from developed and emerging economies, with only a partial recovery expected in 2021.

The forecast assumes that despite the current resurgence in infections in many parts of the world, nationwide lockdowns will not be repeated. Instead, selective and targeted measures will be able to contain this second wave.

Commenting on the outlook, Al Remeithi, chairman of the worldsteel Economics Committee, said, "the global steel industry passed the lowest demand point for this year in April and has been recovering since mid-May. However, the recovery is uneven across countries depending on their success in containing the virus, the national industry structure,

and finally economic support measures. China has shown a surprisingly resilient rebound contributing to a major upward revision of the global growth forecast for 2020. In the rest of the world, we will see a sharp contraction of steel demand, both in developed and developing economies. This crisis has been particularly challenging for developing economies as they continue to struggle with the uncontrolled virus, low commodity prices and falls in exports and tourism. The pandemic has accelerated megatrends which have been slowly transforming both our and our customers' industries, leading to a lasting impact far greater than short term demand consequences."

Background to the forecast

Since the reopening of most economies in mid-May, pent up demand initiated a strong rebound of economic activities, suggesting a V-shaped recovery. However, to date, this has not been enough to offset the drop during the lockdown. Many steel using sectors remain below their pre-COVID-19 level.

A recovery from the pandemic remains fragile due to the second wave of infections, continued social distancing, elevated unemployment and weak confidence allied with increasing concern on the timing of a demand recovery.

On the positive side, health systems are in much better shape to tackle the pandemic now due to the lessons learnt from the first wave. A careful balance between containing the virus and maintaining the viability of economies is

being widely sought. Added to this in the northern hemisphere, there is uncertainty over how COVID-19 will evolve during the upcoming flu season, which may have a serious impact on the outlook for 2021. The risk is tilted toward the downside. A W-shaped recovery cannot be ruled out and a full recovery in 2021 is unlikely.

China

China's strong recovery since late February, which continues at a steady pace, suggests positive GDP growth in 2020 despite a -6.8 percent contraction in the first quarter.

During January-August, investment in real estate was up 4.6 percent year over year (y-o-y), and infrastructure investment recovered to the level of last year. In August, the mechanical machinery and automotive sectors showed a y-o-y growth of 10.9 percent and 7.6 percent respectively. As a result the mechanical machinery sector's output during January-August surpassed that of 2019 (+1.2 percent), while automotive production is still 9 percent below the 2019 level. With retail sales also catching up in August, the Chinese economy is rapidly approaching full normality.

China's steel demand is expected to increase by 8 percent in 2020, aided by government infrastructure stimulus and a strong property market. In 2021, steel demand is expected to stay flat as a result of the following two forces. First, the infrastructure and housing projects initiated in 2020 will continue to support steel demand in 2021. On the other hand

if the economy shows a full recovery the government is likely to reverse its stimulus policy to cool down the construction sector. Given the outlook for a weak global economy in 2021, the manufacturing sector's rebound will be limited.

Advanced economies

Manufacturing in the developed economies, which was only just beginning to recover from the slowdown in late 2019, was pushed back again by the pandemic. Even with a strong bounce back after the economies reopened, which has closed the gap with pre-pandemic levels, double-digit contraction over the whole year still seems unavoidable.

In the U.S., recovery from the lockdown has been strong, aided by substantial government support measures. The manufacturing downturn was shorter and less acute than expected. However, the U.S. is still struggling to control the virus's spread, and the recovery momentum might taper off in the coming months. The outlook for 2021 is less optimistic, with a subdued outlook for construction and auto production.

In Europe, the negative economic impact of COVID-19 was softened by strong social security schemes and fiscal stimulus. The post lockdown recovery in the EU is turning out to be stronger than expected, but the deep contraction of major steel using sectors, especially automotive, will contribute to a double-digit contraction in 2020. The contraction was

See WORLDSTEEL, Page 13



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AUTOMOTIVE

Electric Volvo VNR truck leads truck parade

Volvo Trucks North America's Class 8 VNR Electric truck led a group of Southern California freight movement fleets in a clean truck parade to commemorate the opening of Port of Long Beach's new cable-stayed bridge. The lead Volvo VNR Electric truck was driven by NFI, a third-party supply chain solutions provider, and joined by a second Volvo VNR Electric truck from Dependable Highway Express (DHE). The two fleets, partners in the Volvo LIGHTS (low impact green heavy transport solutions) project, are piloting Volvo Trucks' battery-electric models through 2021, demonstrating the trucks' ability to move freight with less noise and zero emissions.

Volvo Trucks North America is among the first major truck manufacturers to announce plans to commercialize Class 8 battery-electric trucks in North America with its soon-to-market Volvo VNR Electric model, initially targeting local and regional distribution.

The new Port of Long Beach bridge – a \$1.5 billion, seven year joint effort with Caltrans, the U.S. Department of Transportation, and the Los Angeles County Metropolitan Transportation Authority (Metro) – will provide greater access for larger cargo ships to enter the port's inner harbor terminals and provide expanded

capacity for truck traffic. Combined, the Ports of Long Beach and Los Angeles handle nearly 40 percent of the nation's total containerized import traffic and 25 percent of its total exports. Since 2008, the two ports have collaborated on a groundbreaking Clean Truck Program to reduce the impact of truck emissions on the local community, with a goal of fully transitioning to zero emission drayage trucks by 2035.

"The modern, fuel efficient trucks parading across our bridge on Friday signify our industry leading efforts toward breathing cleaner air and improving the quality of life for our community since the Clean Truck Program was enacted 12 years ago," said Mario Cordero, executive director of the Port of Long Beach. "Vehicles like the battery-electric Volvo VNR demonstrate that it's feasible to meet our goal of bringing zero emission trucks to the Port by 2035."

In addition to the Volvo VNR Electric trucks, an array of advanced clean trucks – battery-electric, natural gas, and hydrogen fuel cell electric – were included in the parade.

The project was made possible by an award to South Coast AQMD of \$44.8 million from the California Air Resources Board as part of California Climate Investments.

■ For more AUTOMOTIVE news, see Page B1

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Worldsteel

■Continued from Page 11

particularly pronounced in Italy and Spain.

In Japan and South Korea, despite relatively successful management of the virus with less severe containment measures, steel demand will see a substantial contraction in 2020 with limited recovery next year due to falling exports and weak confidence.

Overall steel demand in the developed economies is expected to fall by -14.9 percent in 2020 and increase by 7.9 percent in 2021.

The COVID-19 pandemic will exert a less severe impact on steel demand in the developed economies than the global financial crisis, bearing in mind that at the beginning of the pandemic, steel demand had not yet fully recovered from the 2008/9 crisis.

Developing economies excluding China

Generally the emerging economies have been less well equipped to absorb the pandemic shock, and the impact has been uneven, depending on the economic structure and the severity of the containment measures required. The impact has included rapidly falling domestic demand, the collapse of exports and commodity prices, and a free fall in tourism with no immediate recovery being seen. A double-digit fall in steel demand is expected in 2020 for the major emerging economies.

India and Brazil have suffered most from a failure to effectively control the virus. India, where one of the most severe lockdowns in the world was

implemented, is expected to see the deepest decline in steel demand in decades. However, a relatively fast recovery should take place in 2021, supported by rural consumption and government investment in infrastructure. In Latin America the impact has been high across the continent due to its structural problems and poor crisis management. The resulting interruption in reforms and deterioration of the region's social stability suggest a slow recovery in 2021.

In ASEAN, while some countries fared well and needed less stringent lockdowns, Malaysia and the Philippines were severely affected. Vietnam will see positive growth in steel demand due to the successful containment of the virus.

The MENA region was also severely hit by the dual shock of the pandemic and falling oil prices.

In 2021, the recovery of steel demand in the developing economies is expected to be less than full but faster than the developed economies, driven by infrastructure investment. Steel demand in the emerging economies, excluding China, is expected to fall by -12.3 percent in 2020 and recover by 10.6 percent in 2021.

Steel using sectors

In general, the steel using sectors suffered less from the lockdown and are recovering faster than the hospitality, aviation, and entertainment sectors. A strong rebound in manufacturing will be counterbalanced with a lasting impact on the steel using sectors' supply chain due to small and medium sized enterprises going bankrupt.

1. Construction

The construction sector remained

more resilient to the COVID-19 shock as many governments focused on implementing public projects. Following the easing of lockdown this continued in the advanced economies, mostly driven by infrastructure investment, pent-up demand, low mortgage rates and easier access to credit.

The construction sector in many emerging economies will see a double-digit contraction in 2020, notably Turkey, Mexico and Brazil, as they enter a deep recession and face financing issues. On the other hand, in China, the construction sector will rebound strongly, thanks to government stimulus measures.

The recovery in 2021 will be slow. Looking forward, infrastructure is expected to drive construction growth in the coming years, especially in developing economies. Financing difficulties arising from worsened government balance sheets might lead to a revision of investment plans. The subdued oil outlook will also put energy sector investments in check, particularly in the US and MENA. Green recovery programmes could boost infrastructure investment in the developed economies.

In the longer term, structural changes in the construction sector will take place, reflecting the shift in demand patterns for office and residential space and major changes in urban design and build regulations.

2. Automotive

The automotive sector suffered dramatic consequences from the pandemic. In April, automotive production fell by -70-90 percent in many countries. While supply side issues dissipated relatively quickly, post-lockdown recovery has

been constrained by a slow return in demand. Global automotive production was down by -34 percent (y-o-y) in Q2 2020. However, in China, robust domestic demand has helped a faster recovery, but overall from January to August 2020 China's motor vehicle production is still 9 percent below the 2019 equivalent. In the rest of the world, the situation is much worse. In January through August, car production in Germany and the US was down by more than -30 percent (y-o-y). For the same comparison period India's passenger car production, which completely halted during the lockdown, is 46.1 percent below last year.

At the same time the industry is going through substantial restructuring with realignment of supply chains for increased resilience, changes in urban mobility patterns along with the ongoing transition to EV.

3. Machinery

The sector was severely hit by the disruptions of supply chains and decline in orders during the lockdown. China led the contraction of the machinery sector in Q1 2020, which was followed by the EU, the US, and Japan in Q2. Since May, the decline of machinery output decelerated, but the industry is still contracting in most countries. Low profits and confidence is causing delays or cancellation of investment projects and making recovery of the sector beyond the initial rebound sluggish. Exceptionally in China, the output level during January through August 2020 has exceeded that of 2019.

The subdued prospect of investment recovery will constrain the recovery of the machinery sector in the mid-term.

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BUSINESS BRIEFS

River Metals acquires Columbus recycling assets

■ River Metals Recycling (RMR), a wholly-owned subsidiary of The David J. Joseph Company (DJJ), has finalized the acquisition of the metal recycling assets of Columbus Recycling in Ashland, Kentucky, Charleston, West Virginia, and Coeburn, Virginia. Columbus Recycling retains ownership and will continue to operate its nine other facilities in Mississippi, Tennessee and Kentucky.

RMR operates 14 locations in Kentucky, Ohio, Tennessee, Indiana, Illinois and Alabama including automobile shredders in Newport and Louisville, Kentucky. The addition of these new locations, including a shredding operation in Ashland, is consistent with RMR's growth strategy and demonstrates DJJ's commitment to expanding its regional recycling platforms.

Capital Waste names Brian Yorston as COO

■ Capital Waste Services, LLC has hired Brian Yorston as chief operating officer.

Yorston began his career in 1995 with Waste Management where he served as a regional manager and corporate director before being promoted to vice president of the Compaction Equipment Division. Most recently, he served as national director, sales and strategic planning for Rehrig Pacific, a manufacturer of plastic pallets, plastic containers, roll-out recycling bins and commercial containers.

Madeksza named CEO and president of Veolia

■ Veolia North America announced that Matt Madeksza, an established business leader with more than 20 years' experience in business development and industrial expertise, has been named president and chief executive officer.

Madeksza's appointment as president and chief executive officer of Veolia North America (VNA) was announced by the Paris-based Veolia group. VNA, which operates in the U.S. and Canada, is a subsidiary of Veolia group.

Madeksza, who earlier held leadership positions with Boeing and United Technologies Corp., has spent the past 14 years with Saint-Gobain Corp. leading global businesses in Performance Plastics, Abrasives and Construction Products.

Madeksza replaces interim president and chief executive officer Brian Clarke, whose years of VNA experience helped effectively guide the company through challenges posed by the COVID-19 pandemic. Under his watch, VNA was able to secure significant acquisitions over the past year including the hazardous waste treatment plant in Gum Springs, Arkansas and the successful transition of VNA's district energy business to Antin Infrastructure Partners.

In his new role, Madeksza will be responsible for overseeing a company that serves approximately 4,000 customers across the U.S. and Canada, building on a track record for operational and customer service excellence.

Lindner Recyclingtech adds location in Singapore

■ Lindner has been doing business in Asia for over 20 years now. In recent years, a greater awareness of the need to manage resources responsibly and, above all, to recover waste materials, has grown in the world's most densely populated region. The Asia-Pacific region has become one of the largest growth markets in the waste management sector. Lindner Recyclingtech, one of the world's leading suppliers of shredding technology and system solutions for recycling, is now strengthening its presence in the region with a new service and sales hub in Singapore, thereby expanding its international service and distribution network.

TORXX adds to executive management team

■ Terri Ward has joined TORXX Kinetic Pulverizer as vice president of sales and business development. Ward brings 30 years of experience including capital equipment acquisition and sales; facility construction and operations; and consulting engineering. A key member of the team that grew SSI Shredding Systems, much of her focus has been to promote size reduction technology and related systems, where she has been deeply involved in applications and solutions development; product and plant design; and process optimization.

Ward joins Michael Drolet, another industry vet at TORXX, who has been promoted to vice president of product development.

Casella receives expansion permit in New Hampshire

■ Casella Waste Systems, Inc., a regional solid waste, recycling and resource management services company, announced that the New Hampshire Department of Environmental Services issued a permit modification to expand the company's North Country Environmental Services, Inc. (NCES) landfill to increase its permitted disposal capacity by approximately 1.24 million cu.yds. of airspace. This expansion will provide approximately six years of additional disposal capacity at the site located in Bethlehem, New Hampshire.

The disposal capacity allows Casella to continue to provide its vertically integrated service to more than 50,000 commercial and residential customers in over 150 communities across the state.

NWRA promotes Taylor and Szczepanski

■ The National Waste & Recycling Association (NWRA) has promoted Jonathan Taylor to director of government and political affairs and Mallory Szczepanski to vice president of member relations and publications.

Taylor will continue to work on government relations and provide support to several NWRA chapters.

In her role, Szczepanski will be responsible for managing member relations, marketing and serving as the NWRA staff lead for the Education Committee, Membership Committee and Future Industry Leaders Alliance.

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Today's automotive recycling environment

by MAURA KELLER

mkeller@americanrecycler.com

Each year, approximately 20 million automobiles reach the end of their useful life – most of which are an average of 10 years or older. As such, many components and valuable parts of these vehicles are subsequently removed and recycled. This is the role of automotive recyclers around the world. As Arnold Bowers, business solutions director at ENGIE Impact explained, automotive recyclers help to optimize recovery of vehicles, save consumers money by offering parts for reuse, and protect the environment by maximizing the resources contained in each car. As such, automotive vehicles are some of the most recycled items in the U.S.; more than 95 percent of vehicles in the U.S. are being recycled at the end of their life.

“Automotive recycling is evolving into a mature marketplace and technology-driven industry that constantly changes to keep abreast of innovations in automotive technology and manufacturing techniques,” Bowers said.

Amanda Richards, vice president of operations at Junk Cars New England said the auto recycling industry has evolved drastically over the past decade or two, mainly because of the rapid increase of the internet and technology. Prior to this, vehicles would be smashed in their entirety or with only a few parts being pulled out to sell. Nowadays, recyclers are pulling more parts and components in order to optimize the value of the vehicle. Used parts sales have skyrocketed due to the capability of auto recyclers being able to sell used parts online through sites such as eBay and Amazon.

“Where small shops were only able to sell to local customers that called or came by the store, now they are able to reach and ship to consumers all over the world,” Richards said.

David Morris, chief merchandising officer at Carparts.com said the automotive recycling industry has evolved in the determination of what can be used and removed from a vehicle



Auto recyclers are pulling more parts and components from end-of-life vehicles in order to optimize the value of the vehicle. Used parts sales have skyrocketed.

and what should be sold as a core or scrapped.

“I have noticed in the last few years that many yards have reduced the items removed from a wrecked vehicle for resale, and I have seen many companies better their labor and man hours between what to take off and stock or what to keep on the vehicle,” Morris said. “The advent of Hollander/eBay collaboration and online cataloging also has helped many yards get inventory listed online and correctly cataloged. Along with better cataloging and better inventory control, I have also seen transparency help the industry tremendously. From auctions all being online and virtual, most of the top yards in the U.S. have full online inventory, including images of the parts and the vehicles the parts are coming off of.”

Changes aside, the automotive recycling industry is also facing a

plethora of challenges. According to Bowers, there are challenges that add to the complexity. As Bowers understands, there is a shortage of trained employees to work in the auto salvage business. “This is not a glamorous, easy or necessarily safe business to work in, so attracting new talent to enter the industry is difficult for sure,” Bowers said. In addition, the business requires a vast amount of reasonably priced salvage vehicles to ensure the recycling pipeline remains robust. And today many salvage vehicles are exported, causing a shortage of “raw material” for the process.

Another challenge is the onset of COVID-19. As Richards explained, in March 2020, businesses began allowing employees to work from home or closed down altogether, greatly decreasing the amount of individual’s commuting to and from work on a daily basis.

“With the decrease in traffic came a reduction in the number of accidents, thus greatly decreasing the supply of vehicles for auto recyclers to obtain at the auctions,” Richards said. Also, due to the fact that many people are losing wages, they are holding onto cars longer and repairing them, when previously they would junk them and just buy another new or used vehicle. Also, tariffs overseas on metal caused metal prices to plummet, greatly affecting the profit for auto recyclers throughout the U.S.

“Hybrid and electric vehicles are becoming increasingly popular,” Richards said. “One issue that auto recyclers have with these vehicles is being able to properly dispose of their unique type of batteries.”

Manufacturers’ Efforts

Bowers believes that recycling of automobiles has always been important

See RECYCLERS, Page B6

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General Motors is leading a sustainable renewable energy transition in the U.S.

General Motors announced a new power purchase agreement for a 180 megawatt solar project, the equivalent of about 47,882 U.S. homes' electricity use for one year. The solar energy will come from a new solar field in Arkansas originally developed by First Solar, Inc. and will use photovoltaic solar modules. With this agreement, GM has the option to store energy for future use, a first for the company.

This deal marks a major milestone for GM – surpassing 1 gigawatt in renewable energy use, which equates to about 110 million LEDs. General Motors is currently the 11th largest off-taker of renewable power in the U.S., and the largest off-taker in the manufacturing sector.

This power purchase agreement will supply three GM sites in the Midwest: Wentzville Assembly in Missouri and Michigan's Lansing Delta Township Assembly will be fully powered by solar energy, and the remaining

power will be allocated to Lansing Grand River Assembly.

"GM's investment supports the use of solar technology, innovated and developed by First Solar in the U.S., to power factories that form the core of the Midwest's industrial resurgence," said Georges Antoun, First Solar chief commercial officer. "As America's solar company, we're proud to support GM's manufacturing footprint in the Midwest with sustainable solar electricity, especially as it builds on over a century of automotive excellence and innovates toward a zero-emissions future."

Among the world's nine largest solar manufacturers, First Solar is the only U.S.-headquartered company. First Solar has invested over \$1 billion in expanding its Ohio factories, establishing the Western Hemisphere's largest solar manufacturing footprint. First Solar has approximately 2,500 employees across the U.S., including



First Solar is a pioneer in PV module circularity, recovering as much as 90 percent of the materials, including its CadTel semiconductor, from every module processed at its recycling facilities in Ohio.

PHOTO COURTESY OF FIRST SOLAR, INC.

more than 1,600 at its U.S. manufacturing facilities, and is working with more than 240 suppliers in Ohio.

First Solar's proprietary thin film solar modules, developed at its R&D centers in California and Ohio, are manufactured using a process that requires less energy, water and semiconductor material. First Solar is a pioneer in photovoltaic module circularity, recovering more than 90 percent of the materials, including its CadTel semiconductor, from every module processed at its recycling facilities in Ohio. Bringing cradle-to-cradle circularity to solar panel manufacturing, 1 kilogram of CadTel can be reused 41 times to generate 2 gigawatt-hours of clean energy, while displacing 1,100 metric tons of carbon dioxide over 1,230 years.

"As GM continues its transition to an all electric, zero emissions future, it is imperative that we also invest in a cleaner grid that can support everything – from our factories to our vehicles," said GM chief sustainability officer Dane Parker. "Investments like these have increased access to renewable power, and with this deal we are exploring the next frontier of renewable energy, which integrate the princi-

ples of circularity and energy storage, among others."

This new agreement follows the news that GM received a 2020 Green Power Leadership Award in the Excellence in Green Power Use category. According to the EPA, GM has demonstrated exemplary action and dedication to significantly advancing the U.S. renewable energy market through voluntary green power use.

Earlier this year, GM announced two other renewable projects totaling 600 MW of solar energy, which are expected to be operational by 2023. General Motors continues to make significant progress in its use of renewable energy to power its operations, combining power purchase agreements, green tariffs and on-site renewable energy projects.

As General Motors works to meet its 100 percent renewable energy goal in the U.S., it will continue to build on its strategy to focus on market solutions to help reduce emissions near the communities where GM operates. How it sources the energy to power its facilities and products is essential to the company's zero-emissions, all-electric vision.

GM invests \$71 million in two Ohio manufacturing plants

General Motors plans to invest \$71 million into two Ohio manufacturing facilities, including \$39 million at its Toledo transmission plant and \$32 million at its Defiance casting plant. Work will begin immediately at the two locations.

The Toledo investment will be used to upgrade and enhance the production of GM's eight speed rear wheel drive transmission and the Defiance investment will be used to prepare the facility for future engine casting components work.

Since 2009, GM has invested more than \$3.3 billion in Ohio. Separately,

GM and LG Chem formed a joint venture – Ultium Cells LLC – and together are investing more than \$2.3 billion to build a new, state-of-the-art battery cell manufacturing plant in Lordstown that will create more than 1,100 new jobs.

Toledo Transmission Operations include approximately 1,700 team members manufacturing and assembling GM's 6 speed, 8 speed and 10 speed rear wheel drive transmissions and 9 speed front wheel drive transmissions.

Defiance Casting Operations currently employs about 580 employees who manufacture cylinder block and cylinder head castings.

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Toyota and Hino develop fuel cell electric truck

With the rapidly expanding interest in heavy duty electric trucks, Toyota Motor North America (TMNA) and Hino Trucks have agreed to jointly develop a Class 8 fuel cell electric truck (FCET) for the North American market.

The companies will leverage the newly developed Hino XL Series chassis with Toyota's proven fuel cell technology to deliver exceptional capability without harmful emissions. This collaboration expands upon the existing effort to develop a 25-ton FCET for the Japanese market which was announced earlier this year. The initial demonstration vehicle is expected to arrive in the first half of 2021.

"A fuel cell powered version of the Hino XL Series is a win-win for both customers and the community. It will be quiet, smooth and powerful while emitting nothing but water," said Tak Yokoo, senior executive engineer, Toyota Research and Development. "Toyota's twenty plus years of fuel cell technology combined with Hino's heavy-duty truck experience will create an innovative and capable product."

"Expanding upon our proud heritage of the Hino powertrain, Toyota fuel cell technology offers our customers a commercially viable, extended range, zero emissions vehicle in the near term," said Glenn Ellis, Hino's senior vice president customer experience. "Hino shares a common focus with Toyota when it comes to durability, reliability, and innovation with the customer at the center of design which makes this collaboration a game changer."

My family told me to stop telling Thanksgiving jokes, but I told them I couldn't just quit "cold turkey."

Jaguar Land Rover incorporates plastic waste in luxury interiors

Jaguar Land Rover is working with Econyl® nylon to develop high-quality interiors made from ocean and landfill waste.

Next-generation Jaguar and Land Rover models will feature floor mats and trims made with Econyl fiber from recycled industrial plastic, fabric off-cuts from clothing manufacturers, fishing nets from the farming industry, and those abandoned in the ocean known as 'ghost nets'.

This commitment to designing sustainable luxury interiors using responsibly sourced and recycled materials is part of Jaguar Land Rover's Destination Zero mission, with innovation helping to make environments safer and cleaner while offering customers a premium, sustainable option.

The Econyl regenerated nylon, created by Aquafil – a global leader in the synthetic fibers industry, has already been used by high end fashion, sportswear and luxury watch brands to create handbags, backpacks, swimwear and watch straps.

The nylon waste is reclaimed by Aquafil from all over the world. In a single year, the company recycles as much as 44,000 tons of waste, with the recycling process reducing the global warming impact of nylon by 90 percent compared with the material produced from oil. For every 11,000 tons of Econyl raw material produced, 70,000 barrels of crude oil are saved and 71,700 tons of carbon emissions equivalent are avoided.

Inside state-of-the-art treatment centers the waste is analyzed, treated and prepared to feed into a chemical plant, where the nylon waste is broken to its original raw material using a chemical treatment process, known as depolymerization. The raw nylon material is then turned into the yarn, known as Econyl.

Throughout the process, other by-products such as non-nylon, metallic materials or copper sulphate which is used for preventing seagrass growing



Currently, Land Rover offers a premium Eucalyptus textile interior on Range Rover Evoque while Evoque, Range Rover and Jaguar's all-electric I-Pace benefit from optional Kvadrat – a high quality material that combines durable wool with a suede cloth made from 53 recycled plastic bottles per vehicle.

on fishing nets, are removed and sent to alternative industries for recycling.

The resulting Econyl regenerated nylon polymer has the same chemical and performance characteristics as raw fossil material, allowing it to be processed into a fiber for carpet flooring and textiles.

This yarn can then be used to manufacture floor mats for future Jaguar and Land Rover models with the goal of using more environmentally conscious and sustainable materials while still providing customers with a premium and hardwearing product.

The process is helping Jaguar Land Rover move towards a circular economy as part of its journey to Destination Zero.

Earlier this year, Jaguar Land Rover was certified for the second consecutive year by the Carbon Trust, confirming business operations across the UK have met the internationally recognized standard for carbon neutrality, known as PAS 2060. Together, these UK based sites represent 77 percent of Jaguar Land Rover's global vehicle production.

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by MARY M. THORNTON

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As the most recycled material in the world, junk vehicles are typically baled at the end of the process. Approximately 27 million cars around the world are recovered for recycling annually and the following manufacturers provide products for processing vehicles.

Al-jon by C&C Mfg designs, manufactures and supplies a complete line of mobile and stationary ferrous and non-ferrous scrap metal and scrap vehicle crushers and balers. The firm ships products worldwide. "The Al-jon 580CL continues to be the #1 best-selling logger/baler in the industry. The running gear, which makes the machine mobile, is incorporated into the baler design. The design provides a very low lift requirement for loading material or vehicles into the huge 19'4" x 10' crushing chamber. Other balers on the market require trailer use and added components, which result in significantly higher lift requirements. The Al-jon 580CL features include a 10' box opening, which provides easy loading and unloading of bulk, loose scrap material, and the box is 1'6" wider than the competition!" stated Curt Spry, sales manager.

The 580CL is a one-operator, fully-transportable, scrap recycling machine, equipped with or without a 360° continuous-rotating material handler. A state of the art cab design includes an adjustable seat, joystick control, heat, A/C and stereo/USB port. The operator cab is "all day" comfortable and roomy with engine heating and cab mounted AC. The machine is capable of processing up to 20 to 30 whole car bodies per hour and 15 to 20 tons per hour of miscellaneous loose scrap. With the baling chamber doors closed, the 580CL will make a 40" x 25" x variable length log/bale. Density is determined by a programmable in-the-cab

module with a range of 30 to 80 lbs. per cu.ft. Operation is manual and automatic capable, with a cycle time of 65 seconds. Machine weight is 97,000 lbs. and size is 8'5" wide, 13'5" tall and 53' long. C&C is the full service distributor (sales, parts and service) for the Bonfiglioli line of portable vertical guillotine scrap metals and scrap car shears and compact scrap metal and scrap vehicle shredders.

John Kitchens, president of Iron Ax, explained, "We offer a 20' and a 16' baler equipped with or without a crane. Our normal build is a 20 foot with no crane. Our balers feature a Cummins engine, and the baler we currently have in production has a new and improved automation system. The baler features automatic cycle and remote control, the latter is rechargeable, and it has a longer range than before."

Kitchens noted how the new modernized control systems allow the remote control to communicate with the engine via a CAN network. The future evolution of this control system will feature optional systems such as remote diagnostics and GPS tracking. The system will also feature on board diagnostics via a control panel display, which in turn will make setting hydraulic pressure easier than ever before. The ability to adjust the pressure allows the operator to make either a loose or a tight bale with the Iron Pack Baler.

"We know what processors are looking for when it comes to a baler. We have roots in scrap metal recycling, and we use the products in our scrap operation every day. Our customer service sets us apart from other manufacturers. Many of our service employees have been with us over 25 years. They not only know the machines, they get to know customers and the operators, too. We are available on the weekends as well. We realize that issues sometimes appear at an

inconvenient time, so we're available almost 24/7 to help our customers resume their operations.

"Our Iron Pack Baler is a high-speed product. Average baling time is approximately one minute and our customers see an increase in tons processed after adding this machine to their operation. Setup time is minimal with all of our balers. Upon arrival at the jobsite, you will be ready to operate in just minutes," said Kitchens.

He noted that baler sales continue to increase as yard owners realize the need for them, and added, "With a car crusher you are limited to crushing cars. With a baler you can process cars, white goods, loose iron and more. A baler is a versatile machine that can help process various streams of scrap. A lot of customers have discovered how they can

See AUTO LOGGER/BALERS, Page B6

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Recyclers

■Continued from Page B1

to manufacturers, but today they seem to think more about it at every stage of the design and building process. Just a few years ago, for example, Ford switched from steel to aluminum for their top-selling U.S. vehicle, the F-150 pickup truck.

"I recall reading at the time that this would raise the recycling rate of this vehicle substantially," Bowers said. "If auto manufacturers are willing to make this type of change to their top-selling vehicles and arguably their most profitable ones, then they most certainly are focused on the type of materials they're using and what the long-term lifecycle of these materials looks like."

However, Morris has not seen many changes in the industry coming from the OEMs. With the addition of electric cars, he has not seen the long-term recyclability of these vehicles being discussed. Morris said fuel econ-

omy and emissions are still the top priorities for OEMs, and the recycling long-term message has not been a priority over the last few years. Even the battery systems have been ignored as a selling opportunity by recyclers.

"In the U.S. right now, hybrid and electric vehicle recycling has been tackled by the traditional parts suppliers," Morris said. "While this could have been a great focused opportunity for salvage yards to take on, this finished goods opportunity was ignored, as yards remain fixated on core sales. Yards need to close the gap on these product opportunities to grow the sellable number of SKUs for the overall industry."

Planning For the Future

The wide variety of plastics used in automobiles today presents a challenge for recyclers – they need to focus on one stream of material at a time. "If they begin mixing various types of plastics together, then the value of these 'mixed bales' will have less value in the marketplace," Bowers said. "Due to these issues, I believe auto manufac-

turers will focus on streamlined materials for their products, and try not to mix material types among components."

Bowers also sees the automotive industry moving to lighter and stronger plastics both in the short and long term. This will have an impact on both the secondary, salvage-for-parts market and the end-of-life recycling market values. The fact that more EVs are coming to market from various manufacturers will also increase the number of lithium-ion batteries that can be recycled.

"I believe the largest auto recycling markets will extend beyond the U.S. in the next 10 years," Bowers said. "Most likely, China will lead the world in the number of vehicles in need of recycling." This will lead to new technologies around separating the types of plastic, metal (steel and aluminum) and rubber from these vehicles. The recycling rates will most likely climb past the current mid-90s to very high 90s or virtually 100 percent of autos being recycled in some way.

The onset of more iPad-like entertainment and vehicle control systems also will lower the number of components like buttons and knobs inside autos. "The lion's share of larger plastic components from the interiors and these single piece electronic systems that can be pulled in an integrated way will streamline the 'breakdown' of modern autos," Bowers said. "I see the influence of our circular economy thought process impacting the end of life of autos because how they will be disassembled at the end of their life will be built into the initial design of the auto."

Richards said the future of auto recycling will become similar to what we see with small shops versus large chain stores. "The number of junkyards will most likely decrease," Richards said. "Auto recycling facilities that have the capabilities to take in a larger volume of vehicles and that have the equipment necessary to pull out and process the various parts of the vehicle will flourish. In order for a yard to be able to do this, a great deal of money

needs to be invested. This is why many of the existing junkyards that have not evolved with the times and technology will be forced to go out of business, because it simply will not be profitable for them any longer."

Morris believes the industry will continue to consolidate as recycling and supply chain costs continue to decrease the gap between used and new parts.

Consolidation also will organize the industry and allow the industry to maintain national quality standards through groups of suppliers. "Body shop business consolidation is inevitable as insurance drives down costs. And with large customer bases growing at the yards, I believe this will also continue to drive yard consolidation," Morris said.

As vehicle technology and accidents over time continue to decrease with better safety and accident avoidance, Morris said the ability to find inventory will continue to be an issue in the used industry. "With large consolidators trying to contractually gobble up wrecked vehicles, and with the evolution of online auctions, the competition at auctions is larger than it has ever been," Morris said. "This continues to drive the wrecked car price higher at the salvage yard level."

The key to success will be in the technology advancements and recyclers embracing that technology. Aftermarket technology has been improving at record speeds, allowing fully computerized and digital reproduction at a fraction of the cost 20 years ago, and this technology will not slow down.

"Salvage yards need to answer the question for their customers: Who is paying for any extra handling of a used part? Is that problem answered with customers? If the problem has been voiced multiple times by the industry, then yards need to figure out how to answer the call," Morris said. "Those in the industry who adapt and develop new technology to make the sale and profit on used parts equal to the new counterpart will ultimately win."

SALVAGING Millions

by Ron Sturgeon
Autosalvageconsultant.com

Pay for performance for your team

The first article in this series listed more than 25 tactics to increase your business success, all of them based on my experience. I started with nothing and didn't attend college, so I know you can achieve maximum success, regardless of your education.

You have sat in class after class, talked to other yard owners about switching over to paying employees for performance, and you are still paying them hourly, thinking all your employees will walk out or that making this change might cause chaos in the business.

Yes, just like you, I was slow to change to pay for performance. I had all the excuses you are making, all the reasons why I should not disrupt my employees, because they were giving me all they had, but was I wrong! I still remember the day I changed to a pay-for-performance system for our employees. In 1998 our delivery driver was having trouble making all the stops.

We soon found out why. He was going to his girlfriend's house and taking naps and we were paying him for it! We changed his hourly pay immediately to pay for performance (pay per stop) and he erupted. He quit on the spot, but we kept going and hired someone else with the new pay plan and have never looked back. The new person thought incentive pay was great because he didn't

have the "baggage" of the former employee.

So why risk the change? As owners we have faith in our employees. We do not follow them around to see if they are spending their time efficiently or wasting our money. Instead of monitoring their work, we give them raises and hire more employees because "They just can't get it done." If you are paying your employees hourly, take a day and just follow them around. You will be surprised at how much they don't do.

The switching to pay for performance will increase your bottom line. How? It will reduce the number of employees while increasing productivity. Pay for performance will weed out the under performers and you will be amazed by what your strong employees are capable of handling.

The driver on pay for performance must keep accurate records for delivery time, miles, etc. Drivers will generally have to load and unload trucks.

We have helped many yards implement pay for performance across their operations, including dismantlers, parts pullers, drivers, and salespersons. In fact, it's one of the best ROI changes we teach owners, over and over, site by site. It's not unusual to see clients get our fees back in a week or less with the changes they implement.

Auto Logger/Balers ■Continued from Page B4

purchase more and/or different types of material than they could prior to running a baler, which allows them to process the materials with ease."

The RM Johnson portable E-Z Log Baler produces a bale in a fast, neat process. "It is ready to operate, after a fluid level check and a user can move the grapple crane up to 400°, reach out 23' and lift 2,000 lbs. By selecting the metal type and volume of each bundle, a user can produce log bales to fit the requirement of the desired market and the E-Z Log Baler can operate from the control platform. The unit can be moved to the same location as the scrap that must be processed. We offer three other logger models as well," stated Dave Van Vleet, sales manager. He added, "Even expensive machines are worthless if the final product can't be shredded. Our innovative hydraulic compression sequence solves this problem. Once loose scrap is loaded onto

the baling chamber, the E-Z Log, as opposed to mere compressing, produces a log that will stay together even when dropped. Yet the rolled logs remain loose and low density enough for a 1,500 hp shredder to easily process them."

He claims the simple but unique design of the machine, with easily accessible components, aids trouble-free operation and servicing. "Fewer moving parts and smaller hydraulic cylinders produce a better bundle at a lower processing cost than other loggers. All of the hydraulic cylinders are manufactured with high-grade, seamless, polished steel at our factory. All E-Z Log Balers also use standard parts and components. Operating instructions are provided by our trained specialists and baler options include stationary or portable; diesel, gas or electric engines. Custom designs and specifications are also available," Van Vleet concluded.

Remember, only you can make BUSINESS GREAT!

This article was provided by autosalvageconsultant.com, which was formed in 2001 by recyclers for recyclers, to help them improve their businesses.

KAR Auctions celebrates employee volunteerism

KAR Auction Services, Inc. d/b/a KAR Global, a global vehicle remarketing and technology solutions provider, recognizes outstanding employee volunteer, Jenny White, during the annual Jefferson Awards ceremony. A program of the nonprofit service organization Multiplying Good, the Jefferson Awards is the nation's largest and longest-running awards ceremony honoring community volunteerism.

"At KAR, we're passionate about giving back and doing good, and we celebrate our incredible employees who create positive change in communities across the globe," said Lisa Price, executive vice president and chief people officer for KAR. "As a Multiplying Good Champion partner, we're honored to recognize Jenny for her meaningful volunteer work, supporting children worldwide."

Since 2013, White has volunteered as a sponsor and advocate with Compassion International, traveling five times to Uganda, forging and making connections with children that will last a lifetime. Compassion International works in 25 countries to release children from spiritual, economic, social and physical poverty. When White's not traveling abroad on mission trips, she serves as an advocate raising awareness and funds for the organization.

Multiplying Good presented the 2020 ceremony as a one-hour streaming video, providing an opportunity to

share inspiring stories from honorees and present awards in a variety of categories, including employees, private citizens and corporations.

"The Jefferson Awards celebrate extraordinary service to others performed by unsung heroes from around the country, corporations, and national figures," said Hillary Schafer, chief executive officer of Multiplying Good. "We're thrilled to continue this 48-year old tradition, bringing together the incredible spirit of those who have proven that service to others is a salve for everything that seeks to divide us."

This is KAR's second consecutive year of partnering with Multiplying Good via the Champions program. Nearly a dozen employee volunteers were nominated for the prestigious award by their peers. A judging panel consisting of members of KAR's management team selected the following Jefferson Awards honorees: Gina Kerr (KAR Global), Randy Murphy (OPEN-LANE), Kathy Sabaski (AFC Philadelphia), and chose White (KAR Global) as the company's finalist.

Multiplying Good is a national nonprofit that uses service to others and recognition as tools to unleash potential, inspire individuals, and transform lives. Founded in 1972 by Sam Beard, Jacqueline Kennedy Onassis, and Senator Robert Taft, Jr., the organization has recognized the extraordinary public service of thousands with its Jefferson Award.



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Li-Cycle selects Rochester, New York as site for lithium-ion battery recycling "hub"

Li-Cycle Corp., a lithium-ion battery resource recovery company, announced the company will invest over \$175 million in its first commercial lithium-ion battery recycling hub in Rochester, New York.

The hub is a wet chemistry-hydrometallurgical facility that will refine battery-grade materials from 'black mass' generated from pre-processing spent lithium-ion batteries and will have the capability of processing material from an equivalent of 66,000 tons of spent lithium-ion batteries, roughly equating to 120,000 electric vehicle battery packs. This comes in addition to its Spoke facility, set to be operational at the park by late 2020, that will produce 'black mass' from spent lithium-ion batteries.

Once fully operational, the hub will be a major producer of battery-grade materials in North America, specifically cobalt, nickel and lithium. This will be the only source of battery grade lithium carbonate in North America and the first commercial facility globally to produce battery grade lithium chemicals from spent lithium-ion batteries. The hub refines these critical materials from anode and cathode active materials (black mass) while achieving optimal economics and minimizing environmental impact. Together, the hub and spoke facilities minimize the overall environmental footprint of the end-to-end resource recovery process and enable a substantially reduced GHG emission intensity when compared to primary production of the same materials.

"We are excited to be able to announce Rochester as the location of Li-Cycle's hub refinery," said Tim Johnston, executive chairman and co-founder of Li-Cycle. "This facility will enable sustainable closed loop production of critical materials for the battery industry, such as cobalt, nickel and lithium, right here in North America, supporting the development of electric vehicles and other sustainable energy applications. We appreciate the continued support of the local community,

government agencies and Kodak in the development of this project."

Li-Cycle has previously run a demonstration Hub in Kingston, Ontario to determine key design criteria for the build out of this first Commercial Hub. The company selected the site for the facility due to the nature of infrastructure available. Construction of the hub facility is set to begin in 2021 and the facility is planned to be fully operational in 2022.

Since its inception, the company has developed and validated Li-Cycle's patented, unique and sustainable processes that allow for the recovery of all critical materials found in lithium-ion batteries, capable of producing battery-grade materials such as cobalt, lithium and nickel at purities required for battery manufacturing. By providing the same critical materials via resource recovery process, Li-Cycle is committed to minimizing the environmental impact of lithium-ion battery manufacturing.

"As part of Li-Cycle's global roll-out strategy, the planned facilities in EBP will enable us to leverage this technology to foster the development of a closed loop within the robust lithium-ion battery supply chain in the U.S and globally," said Ajay Kochhar, chief executive officer and Co-Founder of Li-Cycle. "Our team is excited to be at the vanguard of one of the last and important segments of the electric vehicle and battery supply chains that requires significant development – specifically, how to sustainably handle the incoming 'tsunami' of spent lithium-ion batteries. Without sustainable and economically viable lithium-ion battery recycling, it's likely that electric vehicle proliferation will be substantially hindered. Truly innovative and circular battery recycling is the key to providing a solution for this urgent global challenge and opportunity. Our goal is to play a key role in ultimately reducing the cost of batteries and electric vehicles, thereby enabling the mass adoption of electrified transport."

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