The Aluminum Association

2015 ANNUAL REPORT

Chairman & President's Message

GARNEY B. SCOTT, III
President & CEO
SCEPTER & ASSOCIATION CHAIRMAN

HEIDI BROCK
President & CEO
THE ALUMINUM ASSOCIATION

MOVING THE INDUSTRY FORWARD

The Aluminum Association accomplished much in 2015, though real and serious challenges are still on the horizon. As we enter the uncharted waters of 2016, our goal remains as it has been—to unify membership around key priorities to both capitalize on market opportunities and address looming issues threatening the health of our industry.

Demand for the metal remains solid—up 36 percent and nearly doubling in the transportation market since 2009. Aluminum Association members have committed more than $2.6 billion in domestic plant expansions to help capture this historic growth opportunity.

But these gains will only be realized through continued hard work and continued industry engagement.

Significant market headwinds remain—especially with a dramatic oversupply of aluminum coming from China. The current situation is bad for the domestic market, bad for the Chinese market and bad for the global environment. That's why we've brought membership together around a common sense strategy and action plan to combat this collective challenge—work that will continue into 2016.

For the first time this year, the Association worked with the Executive Committee to develop a "Scorecard" with goals and metrics to measure progress throughout the year. We're pleased with the results which you can find on the next page.

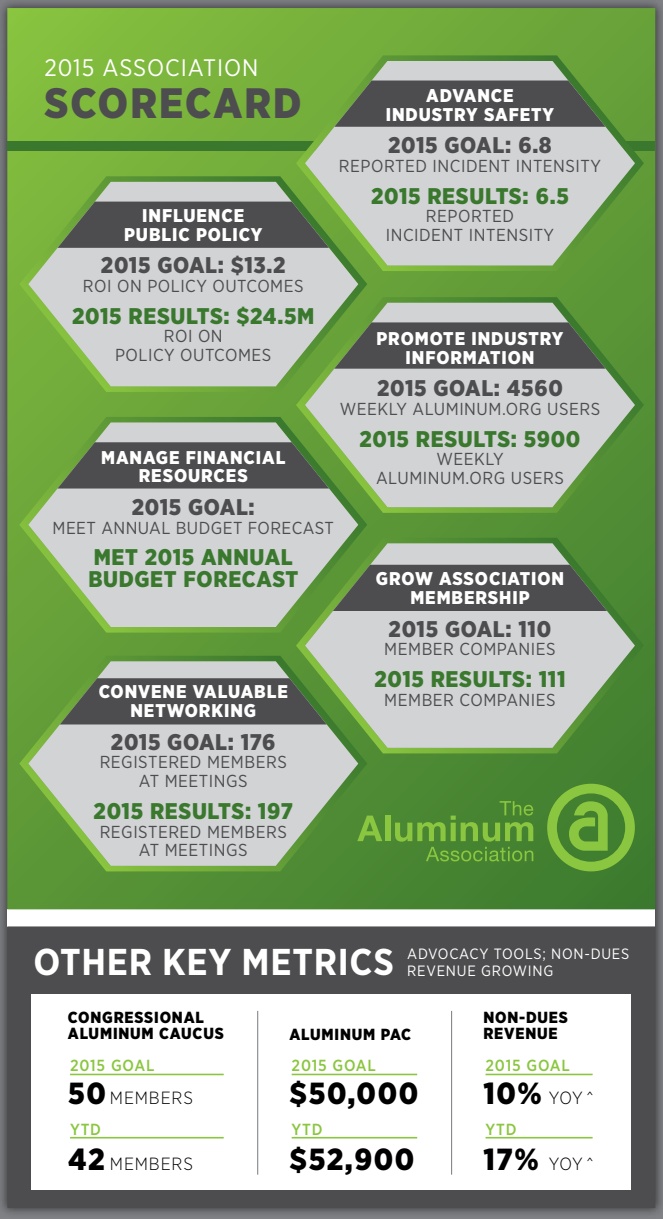
But, of course, the work doesn't end there. In these pages you'll find a series of case studies highlighting some of our major initiatives over the past 12 months to help keep the industry moving forward.

We deeply appreciate your continued engagement with the Aluminum Association. It is only by working together that we can achieve great things. We look forward to continued success in 2016.

Sincerely,

Garney B. Scott, III
President & CEO of Scepter & Aluminum Association Chairman

Heidi Brock
President & CEO of the Aluminum Association



OTHER KEY METRICS

ADVOCACY TOOLS; NON-DUES REVENUE GROWING

CONGRESSIONAL ALUMINUM CAUCUS	ALUMINUM PAC	NON-DUES REVENUE
2015 GOAL	2015 GOAL	2015 GOAL
50 MEMBERS	**$50,000**	**10%** YOY ^
YTD	YTD	YTD
42 MEMBERS	**$52,900**	**17%** YOY ^

The Vision

The Aluminum Association promotes the production and use of aluminum as the sustainable material of choice.

The Mission

The Aluminum Association will:

- Drive communications that aggressively promote aluminum, while developing stakeholder champions for its sustainability advantages.
- Provide timely, relevant industry statistics and information on emerging issues for enhanced industry transparency.
- Create, maintain, monitor and advocate for standards and technical documents that encourage the use of aluminum.
- Successfully advance regulatory and legislative policy in state, federal and international arenas.
- Convene forums on emerging and relevant issues in order to strengthen the industry.
- Facilitate the sharing of best practices in enhancing global health, environment and safety performance.

Approved by the Board of Directors, April 2013

DRIVING AUTOMOTIVE ALUMINUM INNOVATIONS

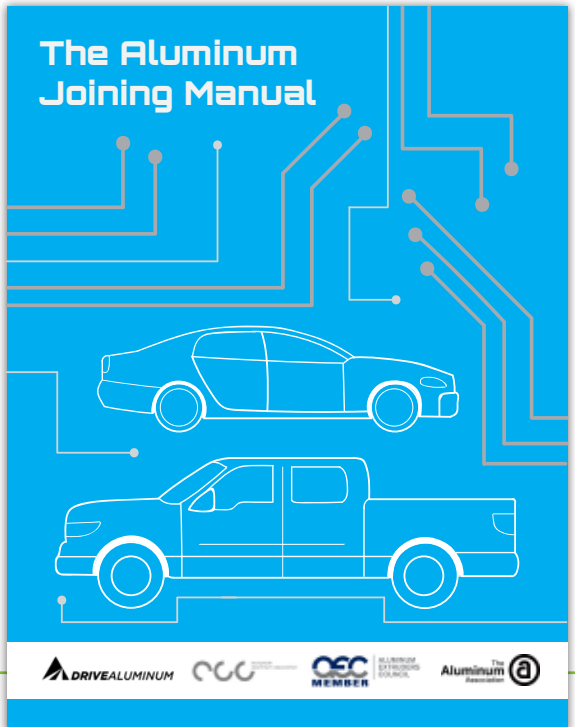
The halo effect of the aluminum-bodied Ford F-150 generated unprecedented visibility and mass-market appeal, setting the stage for a successful 2015 for the Aluminum Transportation Group (ATG). Consumers are, first-hand, experiencing aluminum's advantages in new ways. With increased automaker adoption of aluminum, and greater consumer experience with the metal, not unexpected questions emerged on the reparability, durability, sustainability and manufacturing of automotive aluminum.

To communicate aluminum's value proposition, this year the ATG engaged directly with key stakeholders, including automotive customers and D.C.-based influencers. Notably, the ATG launched a comprehensive, multi-chapter Joining Manual in partnership with the European Aluminum Association to minimize any technical challenges associated with the increased mixed use of aluminum on vehicle platforms.

An extensive visibility campaign promoting this resource resulted in more than 1,000 downloads in 2015 as well as media interviews and articles in prominent publications including *Car and Driver*, *Consumers Digest* and *Manufacturing Engineering*.

Highlighting proactive messages on safety, reparability, strength and durability of aluminum, the ATG participated in several leading industry events, including the ALUMINUM USA trade show, the Southern Automotive Conference and the Society of Collision Repair Specialists OEM Collision Repair Technology Summit.

The ATG is looking ahead to the upcoming midterm review of the federal fuel economy and greenhouse gas emissions standards. With key meetings underway, the ATG is sharpening its technical expertise and output to educate stakeholders about the metal's continued promise as a solutions provider for boosting MPG (and electric vehicle battery range) while reducing total lifetime carbon emissions.

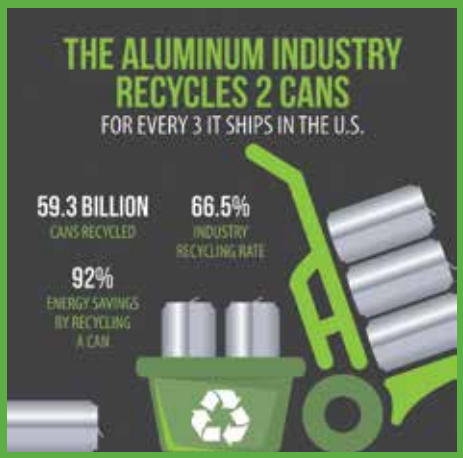


THE ALUMINUM CAN ADVANTAGE

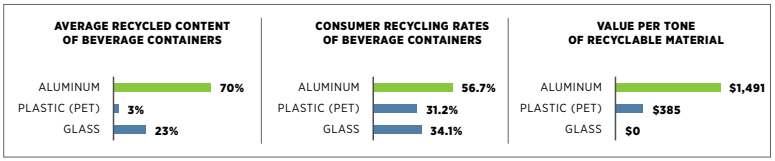
The aluminum beverage can is one of the industry's most iconic products—and a cornerstone of aluminum's sustainability story. Starting in 1972, the Aluminum Association was a pioneer in environmental reporting by recording and reporting an annual recycling rate for the can. Today, many packaging and other consumer product industries have followed suit with rates of their own.

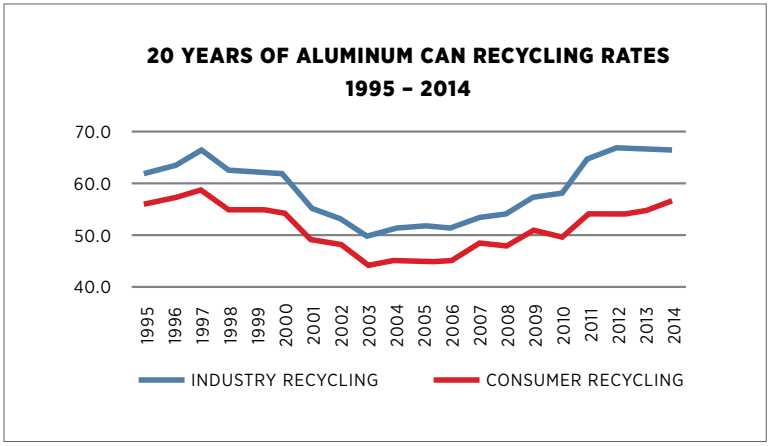
In 2015, the Aluminum Association, through the Can Sheet Producers Committee, led an effort to modernize and update sustainability reporting on the can by releasing a series of Key Performance Indicators—or KPIs.

By replacing a single recycling rate, the KPIs provide a more holistic view—and side-by-side comparison—for the aluminum can's sustainability performance versus competing packaging types. The suite of KPIs for 2015 includes an industry recycling rate, consumer recycling rate, recycled content and value of material.



LEARN MORE AT WWW.ALUMINUM.ORG/CANADVANTAGE





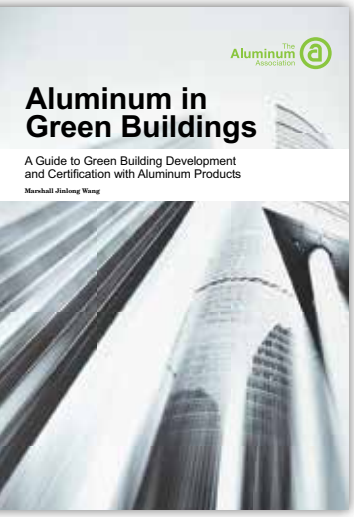
The report found that the aluminum can has the highest recycling rate, highest recycled content and is by far the most valuable item in the recycling bin, compared to glass or plastic.

The Aluminum Association will release a new KPI report each year with new data to track progress over time and to provide a guide for consumers, non-governmental organizations, policymakers and other stakeholders across the value chain.

NEW ALUMINUM GREEN GUIDE, DESIGN MANUAL HELP BUILDERS INNOVATE

As limiting the environmental impact of products big and small—from smartphones to vehicles to buildings—becomes increasingly important, the Aluminum Association is committed to advancing aluminum as the sustainable material of choice. To that end, this year the Association released a new guide to assist and support aluminum users in the building and construction industry to make informed decisions about aluminum products and how they contribute to green building development and commonly adopted certification programs.

The guide—*Aluminum in Green Buildings: A Guide to Green Building Development and Certification with Aluminum Products*—made a big splash in its debut at the US Green Building Council's GreenBuild 2015 conference in Washington, D.C. The publication is based on key requirements of the most current, commonly-adopted green building certifications and construction codes. The *Guide* then elaborates on how users can meet or exceed green building requirements through aluminum solutions. For example, included in the *Guide* is a section on using aluminum in renewable energy systems to help qualify for LEED ® v4 green building certification credits.



2015 also saw the release of the *Aluminum Design Manual*, one of the Association's most popular publications and an indispensable technical resource for architects and designers working with aluminum.

By producing publications like *Aluminum in Green Buildings* and the *Aluminum Design Manual*, the Association and aluminum industry continue to provide transparent and robust information that contributes to sustainable and innovative building development.

EDUCATING THE MARKETPLACE ON ALUMINUM WIRE SAFETY

In 2015, the Aluminum Association's Electrical Division tackled a perennial issue for the wire and cable market—addressing common misconceptions about the safe use of aluminum wiring in commercial and residential construction. Aluminum alloy cables have been safely used for building and home wiring for more than 40 years and have been recognized specifically by the National Electrical Code for more than three decades. Aluminum wire is a far lighter and more cost-effective option than traditional copper wiring. Still, questions remain about its safe use in the built environment following some incidents involving improperly installed aluminum wiring in the 1970s.

In response, the Association engaged in a series of influencer outreach activities to address these concerns. This included meetings with groups including the Independent Electrical Contractors and the National Electrical Contractors Association; a speaking engagement in front of the International Association of Certified Home Inspectors (InterNACHI) conference; and the development of an "Aluminum Conductor Checklist" to help contractors and home inspectors safely and effectively use aluminum wiring.

The Conductor Checklist is currently hosted on the InterNACHI and Aluminum Association websites and was downloaded more than 1700 times in a few short weeks. Next year, this work will continue including the collection of survey data from electrical contractors and the development of a training video on the safe installation of aluminum building wire.

The Aluminum Association

Aluminum Conductor Checklist

Determine the age of the structure ☐ Pre-1972 – *Recommend Licensed Electrician Evaluation* ☐ 1972 and later ***Note:*** *1972 and later buildings wired in AL conductors require no additional evaluation of the AL conductors but do warrant review of the terminations.*	***Pre-1972*** structures wired in Aluminum conductors should be evaluated by a licensed electrical contractor. ***Post-1972*** structures with Aluminum conductors are comprised of the newer AA-8000 series aluminum alloy, are more flexible and reliable, and have been successfully used for over 40 years.
Determine the size of the Aluminum Conductors ☐ Solid Aluminum Conductors (12 or 10 AWG) ☐ Stranded Aluminum Conductors (8 AWG and Larger)* ***Note:*** *Branch Circuits and Feeders made of stranded aluminum are commonly found supplying Ranges, HVAC Equipment, Ovens, Remote Distribution Panels and so on. These applications using Aluminum Conductors should not be a concern for the Home Inspector.*	***Pre-1972*** AL conductors deployed in smaller branch circuit sizes (12 and 10 AWG) are typically the concern at terminations and warrant additional evaluation from a licensed electrical contractor. **** Branch Circuits and Feeders 8 AWG and larger***, typically used in HVAC wiring, Range or Oven Wiring, etc. are used with larger devices that are rated for use with aluminum conductors. These circuits are of no more concern than equivalent copper circuits.
Aluminum Termination Review Terminations Rated for AL Conductors ☐ Yes ☐ No - *Recommend Licensed Electrician Evaluation* ***Note:*** *All Pre-1972 AL wiring should be evaluated at the terminations of devices and utilization equipment to ensure the terminal is rated for use with AL Conductors.*	Verify that the device terminations are rated for use with AL conductors. All device terminals shall be rated CO/ALR if 20 amps or less, and AL/CU if rated higher. If no markings for use with AL Conductors are found, defer to a licensed electrical contractor for evaluation and/or correction.
Aluminum Conductor Preparation* Oxide Inhibitor Present ☐ Yes ☐ No ☐ Unable to determine ***Note:*** *These compounds don't have a deleterious effect on the conductor metal, insulation, or equipment when used in accordance with the manufacturer's installation instruction.* ****Recommended: Review the "Standard for installing Aluminum Building Wire and Cable– NECA/AA 104-2012" for additional guidance on AL Conductor Preparation***	While the National Electrical Code [NEC] doesn't require the use of joint compounds or oxide inhibitors, the NEC does state that if such compounds are used they shall be of the type designed for use with AL conductors and that will not adversely affect the conductor, installation, or equipment. [110.14] ***Note:*** *Lack of oxide inhibitor should not create a defect notice unless the electrical equipment calls for such compounds.*
Aluminum Tightening Torque Specification* – Pre-1972 Any torque damage or arcing seen: ☐ Yes ☐ No ***Note:*** *Over- and under-torqued terminations on AL Conductors can lead to premature failure at the termination. Signs of improper torqueing include physical damage observed on the conductors at termination or evidence of arcing at terminal points on devices and utilization equipment.* ****Recommended: Review the "Standard for installing Aluminum Building Wire and Cable – NECA/AA 104-2012" for additional guidance on AL Conductor terminations.***	Pre-1972 single aluminum conductors were less flexible and subject to a wider range of "creep" when terminated incorrectly. All terminations must meet the specifications given in UL Standard 486. ***Note:*** *Informative Annex I in the NEC also provides recommended tightening torque tables extracted from UL 486A-B.*
Aluminum to Copper Connections- (Where applicable) Properly Listed Splice/Transition Device Used ☐ Yes ☐ No-*Recommend Licensed Electrician Evaluation*	All transitions from Aluminum to Copper at splice points, terminals and junctions shall be done with listed devices or components designed and evaluated to eliminate the potential of dissimilar metal contact resulting in a galvanic action which may results in weakening or potential failure of the termination.
Solid Strand Aluminum Conductors ***Note:*** *Typical Branch Circuit Sizes to recommend evaluation are 12 or 10 AWG Solid Aluminum Conductors.* **Multiple Strand Aluminum Conductors** ***Note:*** *In accordance with NEC Section 310.106(C), where installed in raceways, conductors 8 AWG and larger, unless permitted elsewhere in the NEC, shall be stranded. These larger conductors are less of a concern than smaller conductors that were prevalent in the 1960s and 70s.*	***Pre 1972*** – Recommend evaluation of all terminations at devices and utilization equipment or proper torque values, conductor and device damage and overall terminal preparation.

www.aluminum.org

Advocacy

YOUR VOICE FOR A STRONG INDUSTRY

This year saw the continuation and expansion of the Association's engagement strategy to grow the voice of the aluminum industry in Washington, D.C. and beyond. Using a variety of new tools and channels, the Association has worked aggressively to tell the industry's story to those whose decisions can impact your business. This engagement can lead directly to policy success.

Our "Rethink Aluminum" targeted online advertising campaign drove more than 8.7 million impressions and 12,000 engagements with our website from Beltway insiders—including clicks from the House and Senate, the Department of Energy and the Environmental Protection Agency. The bipartisan Congressional Aluminum Caucus continued to grow and now claims more than 40 members in the House of Representatives.

AluminumPAC, the Association's Political Action Committee, raised more than $50,000 and made its first contributions in 2015. We also helped facilitate several tours for members of Congress to visit Association member sites around the country. These tours provide a key touchpoint for elected officials to better understand the industry.

And this year also saw the launch of a brand-new tool—AluminumNation—the Association's first-ever online grassroots advocacy network. The AluminumNation network helps facilitate communication between policy-makers and industry supporters. Coupled with our more than 14,000 followers on social media channels like Facebook and Twitter, the Association is building the grassroots network we need to support a strong domestic industry.

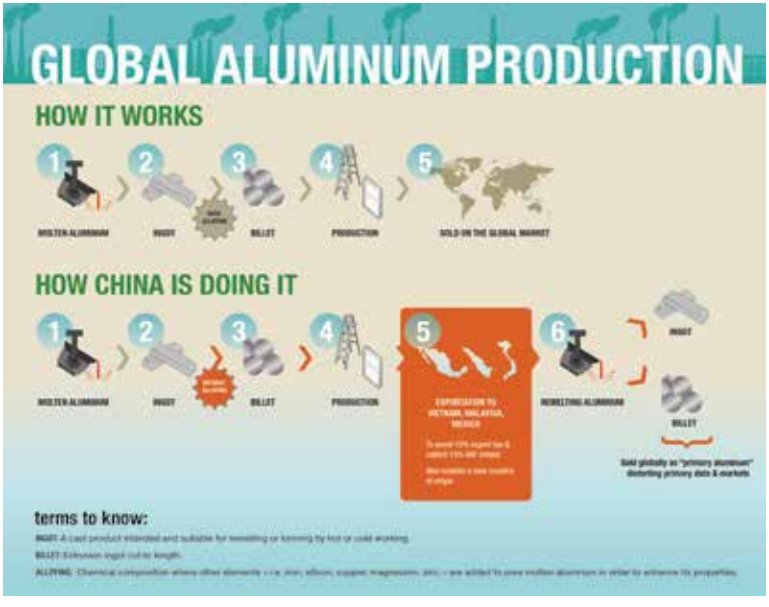
Aluminum Nation

1. Tennessee Governor Bill Haslam addresses Association membership
2. Aluminum Caucus briefing on China trade issue
3. Rep. Marsha Blackburn attends AluminumPAC event in Nashville

LEVELING THE PLAYING FIELD ON TRADE

An increasingly globalized marketplace presents opportunities for the North American aluminum industry—but also challenges. In 2015, Aluminum Association member companies rallied together to respond to one collective challenge, the increasing oversupply of aluminum made in China.

Over the past decade, Chinese aluminum production has grown at a rate unprecedented in global economic history. In 2000, China produced about 11 percent of the world's aluminum—today, they produce more than half. Much of this expansion was driven by artificial incentives, subsidies and central planning by the Chinese government. The current situation is bad for China and bad for the rest of the world.



ALUMINUM IS:
DRIVING THE ECONOMY FORWARD

RethinkAluminum.org

The Aluminum Association

LEVELING THE PLAYING FIELD ON TRADE

[CONTINUED]

Throughout the year, the Aluminum Association worked at the direction of the Executive Committee Trade Working Group to advocate for a series of common sense measures to ensure a level playing field where all global aluminum producers can compete fairly. This included calling for a crack down on metal misclassification and other illegal trade practices; adding green-house gas reduction targets for Chinese aluminum production to international negotiations on climate change; and pursuing increased market and environmental impact transparency for producers around the world.

The Association highlighted these issues throughout the year in a number of public forums—from mainstream media outlets like *The Wall Street Journal*, Bloomberg and Reuters to a briefing with the Congressional Aluminum Caucus on Capitol Hill to the China Nonferrous Metals Industry Association's annual China Aluminum Week conference.

This work will continue in 2016, but thanks to the industry's collective activity to date, significant progress has already been made.

1. Association Chairman Garney Scott addresses membership
2. Assistant Secretary of Commerce Marcus Jadotte at Association annual meeting
3. Hydro's Matt Aboud at Aluminum Caucus Briefing

THREE BIG POLICY WINS

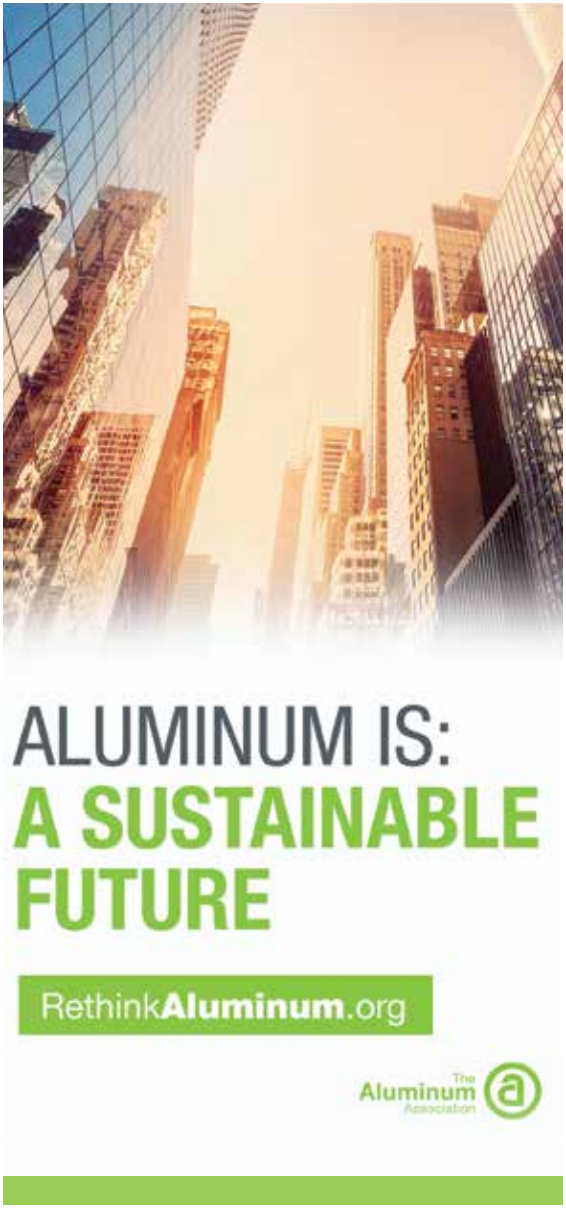
Working through the Government Affairs and Environmental Committees, the Association delivered three major policy victories for the industry in 2015.

First, by working with members of the Congressional Aluminum Caucus, the Association was successful in having report language included in the House Energy and Commerce Committee report for the Toxic Substance Control Act (TSCA) bill. The report directs the Environmental Protection Agency (EPA) to revisit previous partial exemption petitions, including for aluminum, to either take action or provide detailed justification for further inaction. This success gives the industry significant leverage with the EPA in correcting long-standing issues with chemical reporting faced by aluminum producers.

Second, the Association worked closely with member companies in contributing to the EPA's final revisions to the Primary Aluminum Maximum Achievable Control Technology (MACT) regulations that incorporated the Risk and Technology Review (RTR) provisions into the rule. This process resulted in the EPA finding that the operation of primary and secondary aluminum manufacturing sites is environmentally protective.

Third, the Association provided the EPA with industry data to develop recently revised standards for air emissions regarding the re-melting of aluminum. The EPA is statutorily required to update these rules every 8 years based on any new technological developments that may have occurred. This positive outcome means that recycled aluminum can continue to play its important role in being part of the solution to global environmental challenges.

THE ALUMINUM ASSOCIATION DELIVERED **THREE BIG POLICY VICTORIES** FOR THE INDUSTRY IN 2015



ALUMINUM USA TAKES DETROIT

For the first time in more than a decade, the Aluminum Association sponsored an industry trade show in North America in 2015. The event, presented in partnership with Reed Exhibitions, convened more than 170 global exhibitors and more than 900 attendees at the Cobo Center in Detroit, MI. The show demonstrated the industry's commitment to the automotive market with educational presentations from Alcoa and Sapa on advancements in the auto industry through the use of aluminum complementing the sold out exhibition hall.

The Association was able to offer discounts to member companies, including a 10 percent discount of the raw space, a 15 percent discount on the standard costs of any sponsorship package and a free ¼ page ad in the guide for the ALUMINUM 2016 World Trade Fair in Dusseldorf Germany. More than 15 Association members exhibited at the trade show and additional members attended the show to learn more about innovations in the industry.

The success of the initial show confirmed support for the trade show concept in the U.S. for the aluminum industry, and generated initial support for a planned 2017 edition of the event. The show also proved to be a good complement to the Association's annual meetings by offering more member-to-member networking and another platform for the Association to promote the industry to external audiences.

SUSTAINABILITY WORKSHOP BRINGS TOGETHER STEWARDSHIP EXPERTISE

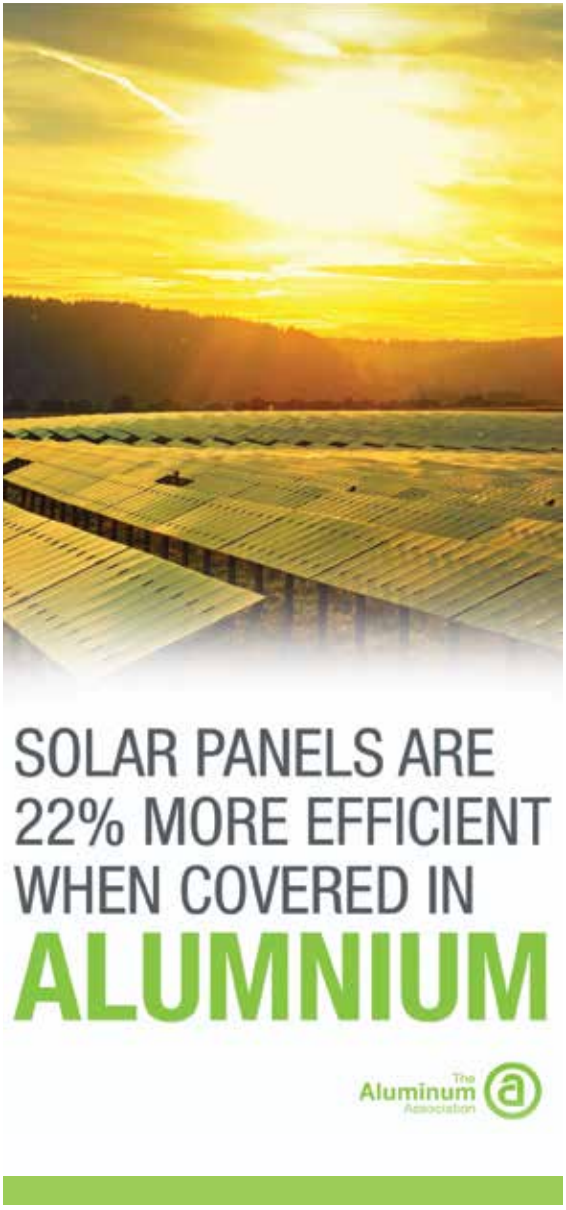
For the first time ever in 2015, the Aluminum Association hosted a Sustainability Workshop to educate industry technical and communications staff on the industry's overall environmental stewardship platform and map out areas for improvement. The 1.5 day session, hosted at the Association's new offices in Arlington, VA, featured several top experts in the field of sustainability and life cycle assessment (LCA) thinking.

Included in the line up were representatives from Athena Sustainable Materials Institute, Think Step (formerly P.E. International), the Environmental Protection Agency, the U.S. Green Building Council, Northrop Grumman, Toyota, GE and the Environmental Defense Fund. The group uncovered several key issues facing the industry on the sustainability front—from strategies to push back against competitors purposely using misleading data against aluminum to a leading LCA database relying on outdated industry information.

One immediate outcome—following the workshop, Association staff successfully petitioned the organization responsible for the outdated LCA database to update its information. This has real-world, positive consequences as the database in question is widely used by the North American automotive industry to assess energy savings and greenhouse gas emission reductions for new vehicle designs.

Participants also learned of emerging trends in the sustainability world, explored how other companies and industries use LCA data and discussed how a robust sustainability platform can create bottom line ROI.

THE ASSOCIATION IS PLANNING ANOTHER SUSTAINABILITY WORKSHOP IN 2016. **WE HOPE TO SEE YOU THERE!**



RECORD PARTICIPATION IN INDUSTRY SAFETY WORKSHOP

Contributing to the safety and well-being of aluminum industry workers has long been a top priority of the Aluminum Association and the aluminum industry. Since 1993, the Association has hosted biannual Casthouse Safety Workshops to educate industry employees—from plant managers to furnace tenders—on the proper handling of molten metal in the casthouse, personal protection equipment and how to prevent incidents from occurring. This year, the workshop training series trained more than 180 participants from more than 50 companies—a record in the program's 22-year history.

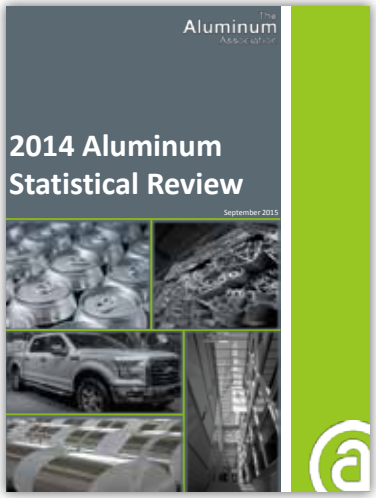
Sessions are designed to be interactive in nature, allowing assessment of real world scenarios by small groups to enable collaboration and networking across job functions and companies. In 2015, workshop attendees learned the facts and causes of recent major incidents with applicability to the aluminum industry including a major molten metal explosion in the United States and a major combustible dust deflagration in Taiwan. In addition, the workshops explored the growing trend of hands-free casting starts as a way to minimize employee exposure to molten metal incidents.

The workshop continues to enjoy strong attendance and provides benefit to both new and veteran employees who value a refresher on the potential hazards involved in their day-to-day activities and how to prevent them. Moving into 2016, the Association will continue to work on enhancing the training series to ensure the industry continues its role as a leader in employee safety.

ABOVE:

2015 Casthouse Safety Workshop activities

MODERNIZED REPORTING FOR A GROWING INDUSTRY

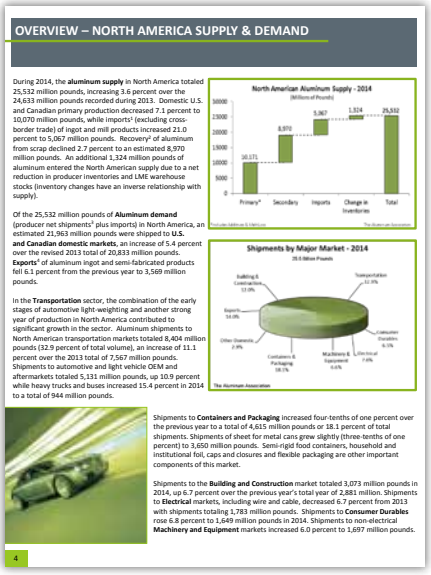


In order to maintain its position as the principal source for statistics and business information on the aluminum industry in North America, the Association strives to keep pace with emerging trends and ensure its statistical offerings meet the requirements of business leaders and decision-makers. With that in mind, in 2015, the Association modernized the distribution for several of the 30 statistical reports it produces on an ongoing basis. This new method of distribution allows for better tracking and data collection, enabling better service for subscribers.

In another step forward for its Statistics and Business Information program, the Association released its annual *Aluminum Statistical Review* publication earlier than ever before in 2015 with a revamped design and all-digital format.

The Association also ensures that its statistical offerings reflect changing dynamics in the marketplace by regularly evaluating and improving methodologies and processes. For instance, in 2015, the Association altered the method by which it considers components of the supply of aluminum, leading to an extensive restatement of extrusion shipments since 2001.

Finally, and along the same lines, the Association has begun providing additional foreign-trade data in a number of its publications and was excited to release two brand new statistical reports in 2015: *Shipments of Extruded Products by Region & State and U.S.* and *Canada Aluminum Extrusion Billet Demand*.


OVERVIEW – NORTH AMERICA SUPPLY & DEMAND

During 2014, the **aluminum supply** in North America totaled 25,532 million pounds, increasing 3.6 percent over the 24,633 million pounds recorded during 2013. Domestic U.S. and Canadian primary production decreased 7.1 percent to 10,070 million pounds, while imports[1] (excluding cross-border trade) of ingot and mill products increased 21.0 percent to 5,067 million pounds. Recovery[2] of aluminum from scrap declined 2.7 percent to an estimated 8,970 million pounds. An additional 1,324 million pounds of aluminum entered the North American supply due to a net reduction in producer inventories and LME warehouse stocks (inventory changes have an inverse relationship with supply).

Of the 25,532 million pounds of **Aluminum demand** (producer net shipments[2] plus imports) in North America, an estimated 21,963 million pounds were shipped to **U.S. and Canadian domestic markets**, an increase of 5.4 percent over the revised 2013 total of 20,833 million pounds. **Exports**[3] of aluminum ingot and semi-fabricated products fell 6.1 percent from the previous year to 3,569 million pounds.

In the **Transportation** sector, the combination of the early stages of automotive light-weighting and another strong year of production in North America contributed to significant growth in the sector. Aluminum shipments to North American transportation markets totaled 8,404 million pounds (32.9 percent of total volume), an increase of 11.1 percent over the 2013 total of 7,567 million pounds. Shipments to automotive and light vehicle OEM and aftermarkets totaled 5,131 million pounds, up 10.9 percent while heavy trucks and buses increased 15.4 percent in 2014 to a total of 944 million pounds.

North American Aluminum Supply - 2014

Shipments by Major Market - 2014

Shipments to **Containers and Packaging** increased four-tenths of one percent over the previous year to a total of 4,615 million pounds or 18.1 percent of total shipments. Shipments of sheet for metal cans grew slightly (three-tenths of one percent) to 3,650 million pounds. Semi-rigid food containers, household and institutional foil, caps and closures and flexible packaging are other important components of this market.

Shipments to the **Building and Construction** market totaled 3,073 million pounds in 2014, up 6.7 percent over the previous year's total year of 2,881 million. Shipments to **Electrical** markets, including wire and cable, decreased 6.7 percent from 2013 with shipments totaling 1,783 million pounds. Shipments to **Consumer Durables** rose 6.8 percent to 1,649 million pounds in 2014. Shipments to non-electrical **Machinery and Equipment** markets increased 6.0 percent to 1,697 million pounds.

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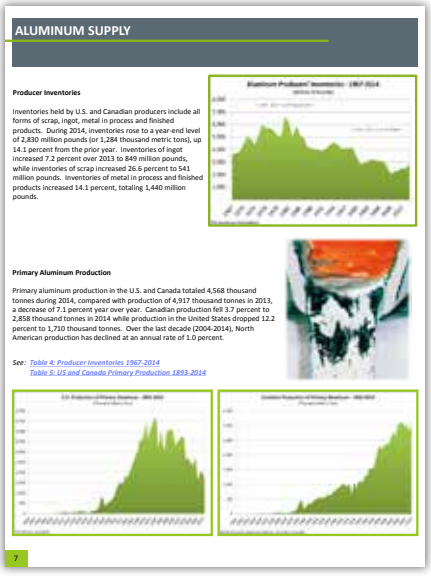
ALUMINUM SUPPLY

Producer Inventories

Inventories held by U.S. and Canadian producers include all forms of scrap, ingot, metal in process and finished products. During 2014, inventories rose to a year-end level of 2,830 million pounds (or 1,284 thousand metric tons), up 14.1 percent from the prior year. Inventories of ingot increased 7.2 percent over 2013 to 849 million pounds, while inventories of scrap increased 26.6 percent to 541 million pounds. Inventories of metal in process and finished products increased 14.1 percent, totaling 1,440 million pounds.

Primary Aluminum Production

Primary aluminum production in the U.S. and Canada totaled 4,568 thousand tonnes during 2014, compared with production of 4,917 thousand tonnes in 2013, a decrease of 7.1 percent year over year. Canadian production fell 3.7 percent to 2,858 thousand tonnes in 2014 while production in the United States dropped 12.2 percent to 1,710 thousand tonnes. Over the last decade (2004-2014), North American production has declined at an annual rate of 1.0 percent.

See: *Table 4: Producer Inventories 1967-2014*
Table 5: US and Canada Primary Production 1893-2014

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THE VERSATILITY OF ALUMINUM ALLOYS

For more than 60 years, the Association has been the standard setting organization for North America—working with the aluminum industry to register new aluminum alloys. Aluminum alloys are used in everything from automobiles to airplanes to buildings to smartphones. Even everyday consumer products like cans and foil rely on standards developed by the Aluminum Association. To further advances in major markets like transportation, building and construction and packaging, the industry continues to innovate and registers new alloys each year through the Association's Technical Committee on Product Standards.

This year, the Association led an effort to educate stakeholders about the versatility of aluminum by releasing new content focused solely on aluminum alloys and by updating publications on the alloy development process.

The Association launched a brand new web page dedicated to explaining various wrought aluminum alloys, which quickly became a popular page on the Association's website garnering more than 3,000 page views in just a few months. To round out the content, a sharable infographic titled "Aluminum Alloys 101" distills the complex topic into simple, visual form.

We also updated the Association's publication *Aluminum and Its Alloys* to include a new section highlighting the many advantages of using aluminum alloys.

The Association will continue to educate about the versatile uses of aluminum and the importance of alloy development in 2016.

THREE TYPES OF ALUMINUM ALLOYS:

1 COMMERCIALLY PURE

2 HEAT-TREATABLE

3 NON HEAT-TREATABLE

NON HEAT-TREATABLE ALLOYS

Non heat-treated alloys are strengthened through cold-working. Cold working occurs during rolling or forging methods which build up dislocations and vacancies in the structure. By inhibiting atoms' movements relative to each other, the alloy increases in strength.

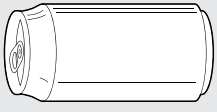
3XXX SERIES

A limited amount of manganese is added, and often small amounts of magnesium as well.

The series serves as general purpose alloys because it has moderate strength and good workability.

COMMON ALLOY DESIGNATIONS:

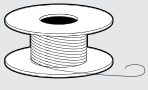
3004 aluminum beverage cans



heat exchangers 3003

4XXX SERIES

Silicon can be added to lower the melting point of these alloys without affecting brittleness

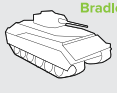


Excellent welding wire and brazing alloys where a lower melting point is required. Widely applied as filler alloys, used in structural and automotive applications

5XXX SERIES

One of the most effective and widely-used alloying elements, magnesium adds a wealth of benefits in manufacturing

Bradley fighting vehicle 5083



5005 architectural applications

5XXX marine applications

Moderate to high strength, good weldability, and resistance to corrosion in the marine environment. Because of this, aluminum-magnesium alloys are widely used in building and construction, storage tanks, pressure vessels and marine applications.

HEAT-TREATABLE ALLOYS

These type of alloys are strengthened by solution heat-treating, where the solid, alloyed metal is heated to a specific point. Next, the alloy elements (solute) are homogeneously distributed, forming a solid solution. The metal is subsequently quenched, or rapidly cooled, freezing the solute atoms in place. These atoms consequently combine at room temperature (natural aging), or in a low-temperature furnace (artificial aging), creating a finely-distributed precipitate.

2XXX SERIES

Copper serves as the principle alloying element, gaining additional strength

High strength and toughness, but due to low levels of atmospheric corrosion resistance are generally clad with a high-purity alloy or a 6xxx series alloy.

COMMON ALLOY DESIGNATION:

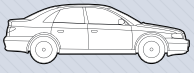
aircraft alloy 2024

6XXX SERIES

Silicon and magnesium combine to feature excellent corrosion resistance

COMMON ALLOY DESIGNATIONS:

6XXX automobile production



Versatile, heat treatable, highly formable, weldable and moderately high strength coupled with excellent corrosion resistance. Extrusion products from the 6xxx series are the first choice for architectural and structural applications.

7XXX SERIES

Zinc is the primary alloying agent, as well as small quantities of magnesium, copper or chromium to increase strength

Featuring extremely high strength and heat-treatable, the 7xxx series are utilized throughout the aircraft industry.

7XXX commercial airliners

COMMERCIALLY PURE

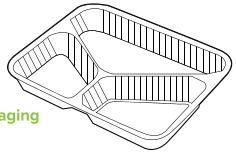
1XXX SERIES

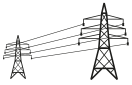
Alloys comprised of aluminum 99 percent or higher purity.

Excellent corrosion resistance, workability, and high thermal and electrical conductivity. The 1xxx series is commonly used for transmission or power lines that connect the national grids across the United States.

COMMON ALLOY DESIGNATIONS:

1100 food packaging trays





1350 electrical applications

CREATING NEW ALLOYS

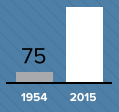
More than 60 years ago, the Aluminum Association established the wrought alloy designation system through its Technical Committee on Product Standards (TCPS), which was adopted in the US in 1954. Three years later, the system was approved as American National Standard H35.1. This designation system was officially adopted by the International Signatories of the Declaration of Accord in 1970 and became an international designation system. In the same year, Standards Committee H35 on Aluminum Alloys was authorized by the American National Standards Institute (ANSI), with the Association serving as the Secretariat.

1954 The Aluminum Association creates alloy designation system through its TCPS

1957 System approved as American National Standard H35.1

1970 System adopted as an international standard

2015 Alloy registration system continus to be managed by TCPS



When the current system was originally developed in 1954, the list included 75 unique chemical compositions. Today, there are more than 530 registered active compositions and that number continues to grow. That underscores how versatile and ubiquitous aluminum has become in our modern world.

NEW OFFICE & MEMBER GROWTH KEEPS ASSOCIATION MOVING

The Aluminum Association was able to deliver results while staying on budget, growing membership to a new level and managing a cost-neutral move to the new office in Crystal City, VA.

While challenges remain for the global aluminum industry, the Association worked with the Finance Committee to meet the financial goals in 2015. The positive budget trend this year was the result of increased dues and meeting sponsorships as well as online advertising and revenue positive events like the Casthouse Safety Workshop and Aluminum USA trade show.

At the direction of the Membership Committee, the Association was able to increase the number of member companies 11 percent year-over-year to a total of 111 member companies—an Association record. These additional voices at the table not only mean more resources for the Association but also strengthen the industry's position in the marketplace and in the policy realm.

In moving offices to Crystal City, the Association was able to deliver on all three relocation objectives—staying sensitive to budget, improving upon a professional image and ensuring an upgrade for the staff. The new building at 1400 Crystal Drive emphasizes our policy and market focus, while maximizing the experience for our membership with a more modern office. The space features a dynamic open workspace with a custom-built screen of aluminum coil provided by United Aluminum and Jupiter Aluminum, as well as billet provided by Sapa. The Association has hosted hundreds of members and other stakeholders since moving to the new space in June.

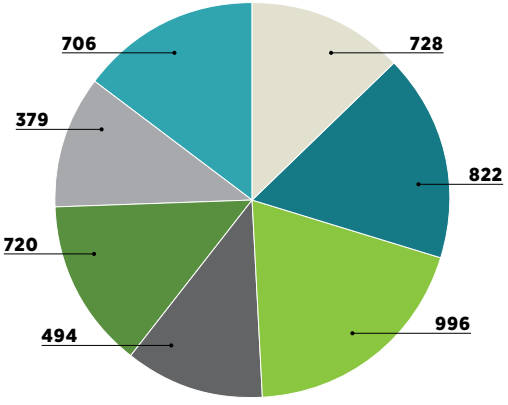
ABOVE:

Jay Timmons, President & CEO of the National Association of Manufacturers, joined for an Open House at the Aluminum Association's new office space in September 2015

Financials

PROGRAM COST - $5.01M

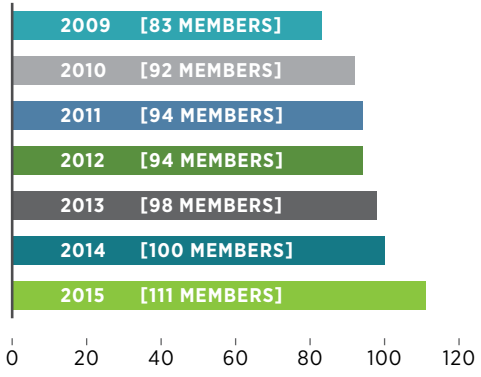
(OFFSET BY $291,000 IN CROSS CHARGES)



TOTAL COST $'000

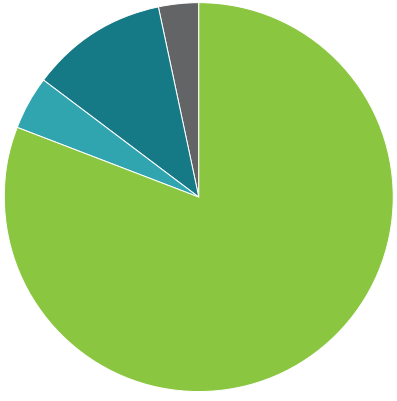
- PUBLIC AFFAIRS
- STANDARDS
- SUSTAINABILITY
- EH&S/POLICY
- BUS. INFO/MEMB.
- GOV'T AFFAIRS
- ADMIN/OVERHEAD

MEMBERSHIP GROWTH

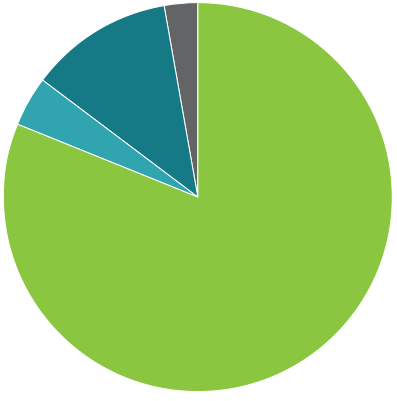


BUDGETED PROGRAM SPENDING

2015 | $6.0M



2016 | $6.2M



- CORE
- PRODUCT DIVISIONS
- MARKETING CMTES
- SPECIAL PROGRAMS

Leadership

THE ALUMINUM ASSOCIATION EXPRESSES ITS SINCERE APPRECIATION TO ALL MEMBERS WHO SERVED IN LEADERSHIP ROLES AND OTHERWISE ON ASSOCIATION COMMITTEES, DIVISIONS, THE BOARD OF DIRECTORS AND EXECUTIVE COMMITTEE IN 2015.

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(Vice Chairman) *
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Jerry Sweeney
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* Executive Committee Member

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JD Rutt
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NOMINATING
Sean Stack
CHAIRMAN | ALERIS

STATISTICAL & MARKET RESEARCH
Dave Hohman
CHAIRMAN | ALCOA

SUSTAINABILITY & COMMUNICATIONS
Wes Oberholzer
CHAIRMAN | CONSTELLIUM

TECHNICAL COMMITTEE ON PRODUCT STANDARDS
Francine Bovard
CHAIRMAN | ALCOA

TECHNICAL COMMITTEE ON WELDING & JOINING
Tony Anderson
CHAIRMAN | HOBART ALUMINUM

ASSOCIATION LEADERSHIP MICHELLE O'NEILL, GARNEY SCOTT & HEIDI BROCK

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CHAIRMAN
ALCOA

ELECTRICAL
Christel Hunter
CHAIRMAN
GENERAL CABLE

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Barton White
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Brian Pendrak
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ALCOA

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WE WOULD LIKE TO THANK THOSE WHO GENEROUSLY CONTRIBUTED TO THE ALUMINUM PAC IN 2015. THEIR FINANCIAL SUPPORT WILL GREATLY HELP US ADVANCE THE INTERESTS OF THE DOMESTIC ALUMINUM INDUSTRY.

* Maximum PAC Contributor

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