

Policy Workshop on Sustainable Materials Management in Arizona

For the last few decades, state policy has had significant influence on sustainable materials management, the recycling sector, and a circular economy in Arizona. However, there has been limited engagement between policymakers developing these regulations and stakeholders impacted by these policies. In this workshop, we aimed to facilitate discussion among circular economy stakeholders in Arizona to discuss policy and non-policy opportunities for supporting Arizona's circular economy and created an opportunity for these stakeholders to share their ideas with policymakers to encourage future development.

We had over 40 participants representing 27 different organizations in Arizona, including (1) government: ADEQ, the Arizona Legislature, Maricopa Association of Governments, White Mountain Apache Tribe, City of Payson, City of Tucson, City of Phoenix, City of Kingman, City of Tempe; (2) businesses in the recycling sector: GlassKing, Resinate, Recycled City, Republic Services; (3) other businesses that produce and use products: Central Arizona Project, Mortensen, Wells Fargo, Crescent Crown, LocalFirst, Arizona Food Marketing Alliance; non-profit organizations: CHISPA, Azulita Project, Goodwill AZ, WasteNot, Arizona Forward, and Arizona Recycling Coalition, and, (4) academia: Arizona State University.

Participant opinions on a circular economy

We began by asking participants the opportunities a circular economy could offer Arizona and the challenges we face in achieving one.

Opportunities. The most frequently cited opportunity that participants noted as a benefit of pushing a circular economy in Arizona was economic growth and job creation (25 participants). Six of these focused on creating new, high quality jobs and four focused specifically on positioning Arizona as a leader in a new sustainability field. Thirteen noted the production of local feedstocks and resource reuse as an opportunity. Ten spoke to positive environmental impacts, but importantly they considered benefits along the entire plastic life cycle. Only one spoke to waste reduction, but four spoke to climate change benefits (e.g., reduce transportation emissions, reduced landfill gas emissions), and one spoke to sustainability benefits more broadly. Five spoke to positive social impacts, with one mentioning cultural shifts and another citing environmental justice. Finally, three mentioned opportunities for advancing regulatory and policy frameworks for improving the efficiency of the circular economy.

Challenges. According to stakeholders, a major challenge to implementing a circular economy is stakeholder will. Ten spoke to political will as a limiting factor, six to industry will, and two to public will. Twelve cited lack of education as a key challenge to circularity, with seven pointing specifically to the public, and three to other stakeholders (e.g., municipalities, businesses). Two spoke to greenwashing. Fourteen spoke to limitations of the existing system, including scarcity of local processors, existing infrastructure, contamination, and facility ownership, breadth of rural communities, lack of collection and economies of scale. Seven cited limitations of existing markets, such as commodity pricing, lack of markets, and market resiliency. Finally, five cited financial limitations more generally.

Discussion on the policies pre-empted by 9-500.38

A.R.S. 9-500.38, the "Prohibition on regulation of auxiliary containers". This law prevents municipalities from implementing regulations on the production, use or disposal of auxiliary containers, which include recycling mandates or incentives, recycled content mandates or incentives, deposit refund schemes, and product bans or taxes. Another law carrying the same language restricts the implementation of these

regulations by counties. Bills to repeal this statute have been introduced annually since its 2016 implementation, and are often coupled with state-wide policy on auxiliary containers.

Participants had several questions about the law, such as why it was passed, what it aimed to achieve, and if it could be amended to achieve its goals without restricting local innovation. Generally, many stakeholders felt the preempted laws could have benefits if they were implemented at the local or state level. Participants cited economic growth, reduction of waste production, and reduced pressures on landfills and MRFs. Some specifically cited that waste is managed at the local level and communities have different needs, so it is important to allow policy to be implemented at the level of materials management. Participants also noted that when implemented correctly these policies can drive public-private partnerships and make the economic costs of creating a circular economy more equitably shared by stakeholders (e.g., businesses, municipalities, and the public). Finally, these policies can provide actionable steps and direction for driving change.

Some concerns regarding these policies were also raised. They often don't address hard to recycle materials (e.g., small or bulky items, #3-7 plastic). Additionally, local implementation can drive inconsistency between cities, mandates can make people feel they are being forced, and sometimes they fail to achieve their objectives due to poorly written legislation.

Ultimately, participants identified several considerations to maximize benefits and mitigate concerns with policy implementation. First, public and business support are critical to long term success. Many cited education as an important tool in this effort. Additionally, cost-benefit analyses should be conducted before policy implementation to provide transparency and ensure efficacy. Policies must also be synergistic, and when possible, should be used to set statewide baselines that can be built on by municipalities. Policies aimed at increasing recycling must be coupled with efforts to expand endmarkets so there are businesses to process and use materials. Finally, legislative language needs to be carefully considered to prevent loopholes.

Bans and Taxes. Some participants noted these policies can be effective in reducing the production of single use products and providing funding for other projects. They can also remove problematic materials from the waste system, such as plastic bags which are costly for MRFs. However, bans and taxes can turn off the public, businesses, and other stakeholders—incentives are more palatable. Additionally, they can fail in achieving their stated objectives. Bag regulations can fail in particular, if policies drive the use of thicker plastic (has occurred when regulations cite a minimum thickness for bags) or increase the purchase of bags for other uses (e.g., animal waste or trash). There can also be equity concerns if reusable products are not made available to marginalized communities. If bags or taxes are implemented it is important to get stakeholders involved and to ensure policies are written well to prevent loopholes that make them ineffective.

Minimum recycling content laws. Participants felt minimum recycled content laws can drive a more sustainable circular economy market and promote recycling, without requiring the same level of stakeholder buy-in as bans or taxes. Some concerns participants mentioned were that they could conflict with building/engineering standards and that recycled material can be more costly for businesses to use.

Recycling regulations. Participants noted that recycling mandates and incentives can improve recycling rates, and create funding for new programs to promote a circular economy. One concern was that these regulations can feel like an imposition on the public or businesses, creating negative sentiment. They can also be hard to implement in certain settings like multi-family dwellings. Finally, consideration must be given to what types of recycling is regulated, with a focus on products that have a feasible market.

Deposit refund schemes. Many benefits of deposit refund schemes were cited, including the creation of more circular, local supply chains for high value materials, and new business opportunities. This can have

positive impacts on recycling rates, increasing landfill diversion. However, some participants felt DRS can be difficult to implement. DRS requires industry partners to sort materials, government oversight for enforcement and compliance. There can be issues with workforce shortages, and equipment delays. One group noted the privatization of AZ landfills may make it harder to capture DRS materials. Another group noted that collected materials are not always processed into new products, though DRS typically offers cleaner material than single stream recycling. In some instances, DRS may not be cost-effective, due to high transportation and processing costs, and costs can fall on the public. A smaller concern was that these programs can cause theft from recycling bins. Ultimately, participants felt these policies should be implemented at the state level to ensure successful implementation and mitigate concerns.

What solutions to drive a circular economy do you think could be useful and effectively implemented in AZ? What opportunities and concerns do they create?

Policy. Several policies were recommended for fostering a local circular economy and driving business opportunities. “Pay as you throw” (PAYT) laws at the state or local level were both cited as good ways of increasing waste diversion, but one group noted the importance of coupling this with bin inspections to prevent increased contamination. Several groups mentioned the importance of policies to incentivize the development of end markets in Arizona. These can support processors or the use of recycled materials. Several groups also supported the implementation of federal or state “right to repair” laws, which allow consumers to fix products they purchase, increasing product life and reuse rates. The creation of a materials marketplace (which could also be a voluntary program) was also cited as a palatable and effective policy for increasing reuse and driving endmarkets. One group spoke extensively about the importance of implementing requirements for data collection and reporting from haulers, municipalities, and businesses—both upstream and downstream—to develop a statewide database. This is critical for identifying how to increase market efficiencies and measuring intervention success. Design standards provide an opportunity to remove hard to recycle materials from the waste stream, and the use of high value materials makes recycling more feasible. Statewide recycling baselines were also recommended for creating consistency for consumers and economies of scale. Coupled with the emergence of end markets this could be feasible, even for small or rural communities (e.g., AZ glass recycling). Other policies participants recommended were: licensing more haulers and processors, incentivizing end markets, repealing the ban on bans, and implementing state level product taxes.

Acknowledging the lack of political will for new legislations, participants also noted alternative policy opportunities. Updating existing ADEQ rules and regulations could strengthen existing policy frameworks. Another possible opportunity is to link circular economy objectives with other policy issues, such as climate change, water use, job creation and infrastructure. These areas are all directly supported by a circular economy but often the connection is not clear.

Voluntary Programs and BMPs. Voluntary programs and best management practices can improve the cost-effectiveness of recycling and the feasibility of a circular economy, without requiring policy. Several groups discussed drop-off locations as a possible solution for offering recycling of products that aren’t well managed by single-stream recycling. For example, Tucson had to halt glass pick-up due to high transportation costs, but people still put it in their bins, so Tucson implemented a glass drop-off program. With incentives and education they have achieved high participation rates—including restaurants and businesses—received cleaner glass, lowered their costs, and ultimately made glass recycling feasible. Due to the success of this program, they have now expanded to include mixed plastics. Some participants did note concerns about the public burden of drop-offs and reduced recycling rates in other examples though.

Other voluntary programs, such as providing coupon books or personal compost bins, can be used to increase public participation as well. Phoenix has increased recycling rates through several voluntary programs despite policy limitations. Municipalities, cities, and businesses committed to a circular economy can also overhaul their own supply chains to increase their use of recycled materials and drive a

demand for these products.

Funding. The need for reliable statewide funding to catalyze a circular economy was cited as a priority among participants. Many called for the proper appropriation of the recycling fund (A.R.S. 49-837). They noted its historical importance for recycling programs, but also felt its scope should be expanded to include processing, end market development, and research. They felt, if properly allocated, it can promote local autonomy, and spur innovation, particularly in rural communities, small businesses and start-ups.

Partnerships. Many groups discussed the importance of partnerships to fill gaps, reduce costs, and make a circular economy more efficient. Municipalities cannot do everything alone, and they need to leverage partnerships with other municipalities, state agencies, and the private sector. One group noted a state network for municipalities to share best management practices and resources could help build capacity. They could also create regional partnerships, such as the implementation of hub and spoke models. In these instances, municipalities could support a regional MRF, and set up a network of transfer stations to aggregate materials more cost-effectively. This requires municipalities to align their goals, and prioritize benefits to the region as a whole over a single municipality, but there is already a lot of interest in this model. Multi-state partnerships could also increase resiliency, by providing closer, more consistent buyers for sorted or processed materials.

Municipalities and businesses can partner by identifying municipal service gaps that private businesses can fill (e.g., composting, processing, serving businesses or multi-family residencies). Municipalities can then promote local businesses or provide further support through grants. This does create a potential risk for municipalities, but larger cities can handle these more easily. Many participants noted that with policy limitations, businesses play an even bigger role in driving a circular economy and sustainable materials management. Many participants from the business sectors felt that through public-private partnerships, cities can increase business recycling rates without regulation. For example, ADOT could incorporate new engineering specs that would permit higher plastic content into asphalt and create a new endmarket, then bring in businesses that are producing asphalt with recycled materials.

Private-private partnerships also offer opportunities to increase the efficiency of a circular economy for particular products. For example, GlassKing collects clean glass from businesses and brings it to Strategic Materials who processes the glass into new products. GlassKing is able to provide collection services because they have a local buyer, Strategic Materials, and GlassKing provides Strategic Materials with a steady source of clean glass, improving their economy of scale.

Education. Many participants noted that education is a critical component of both policy and non-policy solutions. Contamination and low participation rates increase recycling costs and reduce the market efficiency. Additionally, consumer preferences influence product design, such as their recyclability or use of post-consumer recycled content. Education can address all of these issues. Many felt education should start young (K-12), because it is easier to change their habits, and children can change the behavior of their families. Outreach and education through handouts was also recommended, but some felt these materials go unread or fail to change behavior. Finally, some groups recommend specialized education opportunities, such as fix it clinics or environmental education exchanges, to foster cultural shifts.

Additional considerations. Some stakeholder groups will need more support in transitioning to a circular economy, such as remote and rural communities, small businesses, and the public. Additionally, East Coast and West Coast states are geographically, politically, and culturally different (e.g., landfilling is cheap in AZ where land is plentiful), so policy discussions should be Arizona specific. Finally, there are challenges that AZ does not yet have good solutions for which need further discussion, such as how to serve multifamily residents; how to handle hard to manage items (e.g., bulky items, and plastic films); or how to provide community-scale composting services. Importantly, participants noted recycling alone is not enough and that there needs to be a systematic effort to reduce the use of single-use materials. Equity

was also cited as something that must be kept in mind for the implementation of any intervention.

Conclusion.

This event was the first in Arizona to bring together stakeholders from across the state to discuss how policy can better support a circular economy in Arizona. Despite varying goals, resources and experiences, participants agreed that sustainable materials management offers opportunities to improve Arizona's economy and environment. Though there are challenges to building a resilient circular economy in Arizona, stakeholders identified many policy and non-policy opportunities to facilitate this transition and showcased a nuanced understanding of the system that could inform interventions achieve their stated objectives with careful consideration.