

## Opinion

# Clean materials: An economic engine for the Pacific Northwest and beyond (Column)

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We believe that “clean materials” can be the new clean energy, and that the Pacific Northwest will prosper by accelerating this emerging market.

In the 2000s, clean energy rose to the top of Northwest policymakers’ agenda because it offered tremendous economic and environmental benefits. In response to proactive policies adopted with industry support, private investment poured into projects and companies.

Now the Northwest boasts more than 130,000 clean energy jobs with many more to follow as we continue to decarbonize our economies. Leadership here paid dividends for the region and beyond.

Indeed, clean energy enjoys a remarkable degree of bipartisan support in most parts of the country.

While transforming energy is fundamental to addressing climate change, it’s about half of the solution. That’s why we see mounting interest today in tackling the rest of the picture: what we make and how we make, use and dispose of it.

In a truly circular economy, for example, 100% of all materials and resources would be productively used and re-used. Today, scientists estimate that our economic system is less than 10% circular – resulting in impacts ranging from climate change and degraded ecosystems to oceans of plastic discards and broken recycling systems that bury valuable materials.

Those impacts help explain why more companies want to make their supply chains more resilient and profitable. Also, why institutional investors want to de-risk their portfolios by stepping up corporate disclosure on environmental, social and governance risks and remedial actions. Why ESG assets account for more than one-third of all assets under management today, driven by companies, investors, central banks and consumers. And why the World Economic Forum launched a circular economy initiative to address root causes of climate change and other challenges.

Moving from a linear “take-make-waste” system to one that circulates resources, waste of all kinds is designed out of materials and products before production occurs. Design innovations can target more efficient use of materials, alternative materials or longer life spans. Likewise, materials can be designed for easy repair, re-use or recycling. Since materials are ubiquitous, market opportunities for innovative solutions are plentiful and wide- ranging including:

- Plant-based plastics, adhesives, inks and chemicals that are non- toxic and easy-to-recycle
- Local infrastructure to collect, clean, and refill durable bottles, cups and containers
- Organic waste to renewable natural gas

Two local examples illustrate that diversity. The Portland-based RUTE Foundations company has re-engineered support structures for today’s mammoth wind turbines into modular components that use 50% less concrete, last twice as long, speed up construction and can be removed and reused at end of life. Since concrete alone is responsible for 8 percent of global greenhouse gas emissions, innovations like this are hugely impactful.

Likewise, 8% of U.S. landfills consist of discarded or unsold apparel. The thriving Renewal Workshop company in Cascade Locks repairs, refurbishes and cleans used or damaged garments for 20 apparel brands giving textiles a new lease on life.

Now imagine the opportunities if a regional infrastructure existed to support clean materials in a circular economy.

As early pioneers in clean energy, we know first-hand how smart policies unlock large-scale investment that builds new economic engines. While there is no shared policy and action agenda today, the Center for Sustainable Infrastructure has issued a blueprint to guide the sector's development along with a discussion series organized in partnership with the Clean Tech Alliance. State policymakers have a crucial role to play.

For example, governments can leverage their considerable purchasing power by including clean material standards in their bid specifications, elimination of toxic or polluting product ingredients, or preferences for products designed for repair and re-use. Such requirements would kick-start the demand cycle by providing a guaranteed market for clean producers as we saw in clean energy and green building products. Corporate supply chain requirements can also spur the market, as we're beginning to see today.

Governments can also play an important role with research, training and technical assistance. Washington state's new law, SB 5345, for example, establishes a statewide industrial waste coordination network so that one company's waste – energy, water and materials – becomes another company's valuable resource.

Several proposals at the federal level, such as the Clean Future Act, include programs to rebuild our manufacturing sector to tackle climate change, national competitiveness and quality jobs. The Pacific Northwest is poised to offer strong leadership to help build this new economic engine, just as we did with clean energy.

We know this kind of market transformation is inevitable based on relentless environmental and economic drivers. The only question is whether our region moves quickly enough to capitalize on the opportunity.

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