



Aii has released “Low Carbon Thermal Energy Roadmap for the Textile & Apparel Sector,” authored by Global Efficiency Intelligence. This roadmap outlines scenarios for the sector’s low-carbon thermal energy transition to achieve net zero. The roadmap identifies immediate opportunities as well as the pinch points that need to be addressed to realize the net zero scenario we’ve developed. It also provides recommended actions for apparel brands, textile manufacturers, policymakers, financial institutions, and utilities.

Aii’s Call to Action

While our roadmap outlines a scenario to net zero, its success is not guaranteed – this is a signal of what is possible and what needs to happen. The textile sector is at a critical juncture. With the roadmap for low-carbon thermal energy transition outlining a phased path to 2040, Apparel Impact Institute calls upon brands and suppliers to rise to this challenge and seize the opportunity for transformative change.

Achieving these ambitious goals requires immediate and sustained action, with brands creating the market signal and suppliers leading implementation – supported by brands to ensure an inclusive and just transition. Below is Aii’s call to action for each stakeholder group.

For Apparel Brands: Be the Catalyst for Change

1. Commit to long-term targets on electrification and Renewable Electricity (RE) in the supply chain
2. Offer financial and technical support for Thermal Load Reduction in service of electrification
3. Support supplier RE adoption
4. Ensure sustainable biomass sourcing
5. Advocate for policy and infrastructure development
6. Unlock funding for suppliers

For Textile Manufacturers: Lead the Transition

1. Collaborate with brands for technical and financial support for the transition
2. Implement Thermal Load Reduction projects in service of future electrification
3. Ensure sustainable biomass procurement
4. Collaborate for RE procurement
5. Electrify when the emissions and financial case align

Together: Achieving a Just Transition

The transition to low-carbon thermal energy must be inclusive and equitable. Aii calls on brands to prioritize supplier engagement and collaboration to drive this shift. Through transparency and commitment, brands can develop the necessary business cases for suppliers to implement transition activities. The time to act is now. A collective effort from brands, suppliers, policymakers, financiers, and utilities is essential to transform the textile sector into a leader in low-carbon innovation.

How will Aii support this sectoral transformation?

Industry Collaboration

- **Industry Carbon & Energy Benchmark:** Aii is working with Cascale to develop an Industry Carbon and Energy Benchmark. Reducing carbon intensity (i.e. the carbon emissions of the energy used) is the ultimate goal of bringing a facility's emission down to zero. Energy intensity (i.e. energy efficiency) should improve to enable the business case for reducing carbon intensity. With brand support for the benchmark, Aii aims to develop a long-term business case for decarbonization in the sector. As sourcing teams develop a target average intensity for their supply chain, suppliers receive a signal that a reduced carbon and energy intensity are a sector-wide sourcing requirement, and the industry has moved beyond the obstacles of short-term contracts and differing requirements from brands on decarbonization. Aii will incorporate benchmarking into its programs and offer technical advice to support supplier benchmark improvements. The benchmark remains in development and will launch in September 2025.

- **Industry Decarbonization Roadmap:** Also in collaboration with Cascale, Aii will engage the sector's top 1,500 emitting suppliers to decarbonize. For the Tier 2 suppliers in that list, the focus will align with the activities outlined below. This effort will begin in September 2025.

Climate Solutions Focus

- **Thermal Load Reduction:** Aii will double down its programmatic and CSP Registry focus on solutions that reduce thermal energy needs in facilities. By reducing the thermal load, increased OPEX required for electrification decreases as facilities use less energy. Aii will support facilities in implementing solutions by providing brand-funded technical advice where needed and financial support for CAPEX investments. This initiative is under development, will be piloted in 2025, and will be ready for scaled deployment in 2026.
- **Renewable Thermal Energy Transition:** Piloted as the Renewable Energy Transition Initiative (RETI), this program will be formally launched in China and piloted in India and Vietnam in 2025. Starting in 2026, we will aim for scaled deployment across our focus regions to enable energy transition. This program provides technical feasibility assessments and implementation support for facilities seeking to transition to low-carbon thermal energy sources. In accordance with the findings from our Low Carbon Thermal Roadmap, the process will consider transitional fuel sources such as biomass only when certified supplies of sustainably sourced feedstock can be assured. Due to future limitations of sustainable biomass supply, we do not see this as a long-term solution. Therefore the program will emphasize electrification technologies such as heat pumps, energy storage, and transitions to electric boilers.
- **Climate Solutions Portfolio (CSP) Grant Funding:** Aii will be using CSP grant funding to support suppliers, innovators, and equipment manufacturers in developing sufficient case studies for electrification and thermal load reduction technologies. The aim of these grants will be to generate learnings, remove obstacles, and reduce the price and risk associated with these technologies. Aii will disseminate learnings across the sector so that all stakeholders have a repository of information to support the low-carbon thermal energy transition.

- **CSP Solutions Recruitment:** In addition to supporting solutions with grants, Aii will also be recruiting solutions that don't need grant funding. Many solutions that will support this sectoral transition are already commercially viable. Aii aims to help the sector prioritize solutions by conducting rigorous vetting – ensuring brands and suppliers can focus on implementation over evaluation. Aii does this through partnerships with organizations like Fashion for Good and its wide array of engineers delivering Aii's work in sourcing regions.

Ecosystem Leadership

- **Supplier Advisory Council:** Aii is establishing a Supplier Advisory Council to make sure that supplier needs remain at the core of Aii's support. The energy transition will be a key area of focus during this engagement. Aii will work with suppliers to ensure a just and equitable transition, using insights from these conversations to develop and evolve a collective action impact model.
- **Brand Electrification Market Signal:** Aii will work with its brand ecosystem to develop support for the strategy and direction outlined in the Low Carbon Thermal Energy Roadmap, while also guiding brands on interim steps needed to activate this transition. Brands have a big role to play in policy advocacy, market signaling to OEMs, and long-term assurances of the direction of travel to suppliers.
- **Renewable Electricity:** Noting that the ability to procure renewable electricity is a core enabler of the low-carbon thermal energy transition, Aii will be exploring with its stakeholders to find the appropriate supporting role Aii can play.
- **Financial Ecosystem Leadership:** Using the Brand Finance Playbook, Aii will continue to drive brands to unlock the necessary budgets to support supplier decarbonization. Aii will also continue to facilitate collective financing among brands to increase the volume of textile manufacturers receiving technical and financial support.

If you are interested in engaging with any of these initiatives, please get in touch with us at info@apparelimpact.org.