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Pakistan



Centre for Peace and
Development Initiatives

SUSTAINABLE APPLIANCES IN PAKISTAN

Policy Brief

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Understanding Sustainable Appliances

Making a more sustainable choice is easier for some products than others. While choosing ethically sourced coffee beans or recycled toilet paper may be a no-brainer, knowing which appliances are energy efficient, long lasting and made of environmentally friendly components can be a lot more complicated. There is where the term Sustainable Appliances originate.

Sustainable appliances are designed and manufactured to minimize their environmental impact throughout their life cycle, from resource extraction and manufacturing to use and disposal. They typically have the following characteristics:

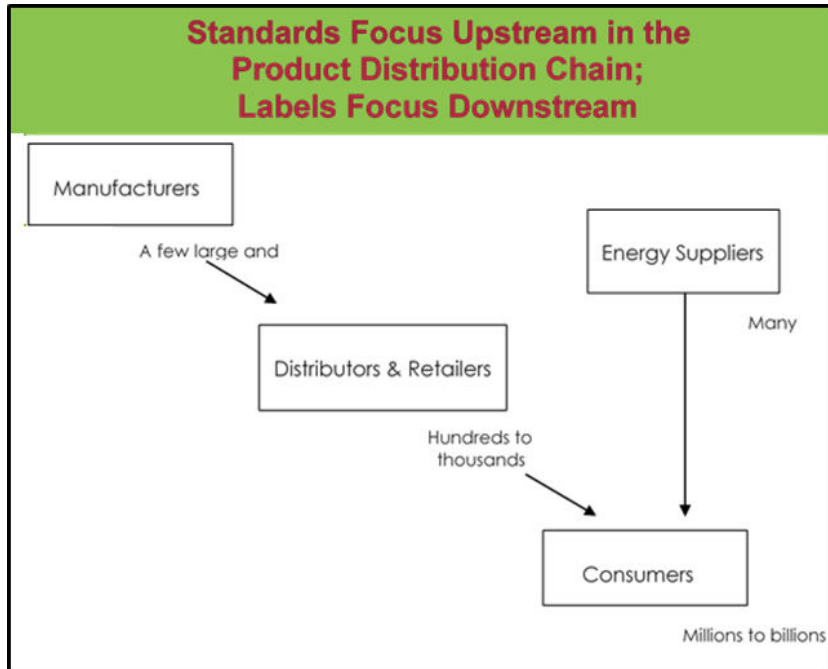
- 1. Energy efficiency:** They consume less energy to operate, reducing greenhouse gas emissions and saving money on utility bills.
- 2. Water efficiency:** They use less water to perform tasks, conserving this precious resource and reducing the burden on water treatment systems.
- 3. Durable construction:** They are made from durable materials and designed to last longer, reducing the need for frequent replacements and associated waste.
- 4. Recycled and recyclable materials:** They are made from recycled materials whenever possible and are designed to be easily recycled at the end of their life, minimizing their impact on landfills.
- 5. Non-toxic materials:** They are made from non-toxic materials to avoid contaminating the environment and protect human health.
- 6. Minimal packaging:** They use minimal packaging, often made from recycled or recyclable materials, to reduce waste and conserve resources.
- 7. Sustainable manufacturing practices:** They are manufactured in facilities that have adopted sustainable practices, such as energy-efficient operations and waste reduction programs.
- 8. Energy Labels/Ratings:** They are certified/endorsed by the authorities having jurisdiction, mainly government-backed program that identifies energy-efficient products.
- 9. Third-party certifications:** They have earned third-party certifications that attest to their sustainability, such as Cradle to Cradle or LEED.

Standards and Labelling

Standards and labels are both tools used to promote sustainability, but they play different roles.

Standards are detailed technical specifications that establish a set of requirements or guidelines for a product, process, or service. They are typically developed by a consensus-based process involving experts from various stakeholder groups, including industry, academia, government, and consumer organizations. Standards aim to ensure that products, processes, and services are safe, reliable, and environmentally friendly.

Labels, on the other hand, are symbols or statements that communicate information about a product or service to consumers. They are typically applied to the product packaging or attached to the product itself. Labels can provide information about a product's environmental attributes, such as energy efficiency, recycled content, or organic certification. They can also provide information about a product's social impact, such as fair labor practices or sustainable sourcing.



Feature	Standards	Labels
Purpose	Establish technical requirements	Communicate information to consumers
Development process	Consensus-based	Typically developed by individual organizations or certification bodies
Scope	Can cover a wide range of technical aspects	Typically focus on a specific environmental or social attribute
Enforcement	May be mandatory or voluntary	Typically, voluntary
Role in sustainability	Help to ensure that products, processes, and services are safe, reliable, and environmentally friendly	Help consumers make informed choices about the products they buy and encourage businesses to adopt more sustainable practices



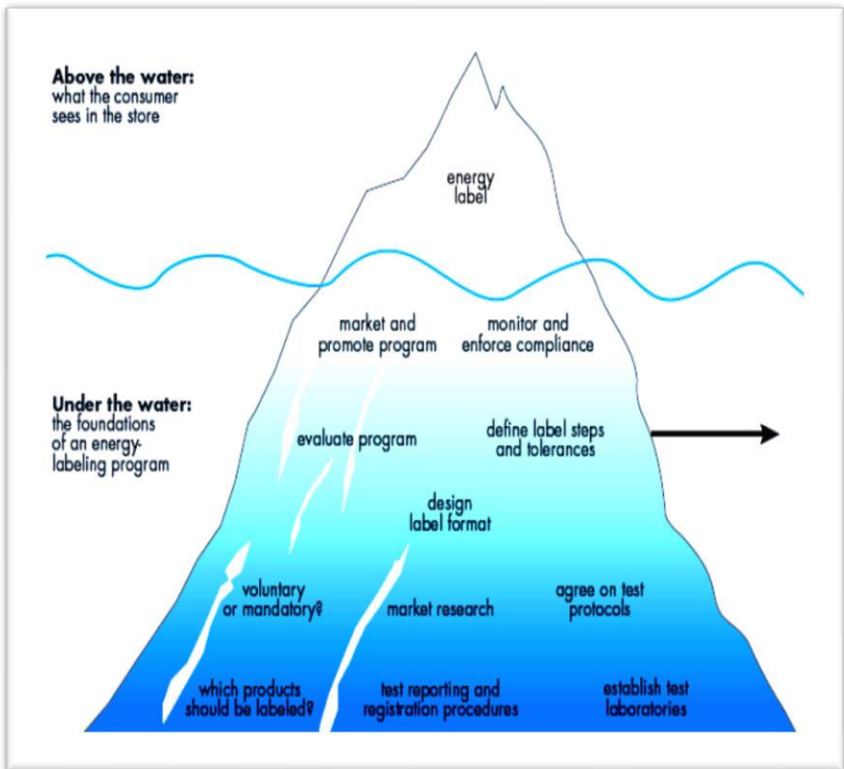
Standards Development

The consensus based standards development requires the involvement of all concerned stakeholders. Pakistan Standards & Quality Control Authority (PSQCA) involves all Stakeholders in the Standards Development Process. There are 167 items in the mandatory standards list of the PSQCA.



Energy Labels

Energy labels are a crucial tool for promoting sustainable appliances and enabling consumers to make informed choices that benefit both the environment and their wallets. These labels provide clear and concise information about an appliance's energy efficiency, allowing consumers to compare different models and select those that consume less energy. In the context of sustainable appliances, energy labels play a pivotal role in guiding consumer choices, driving market transformation, enhancing sustainability efforts & empowering consumers.



In Pakistan, the National Energy Efficiency & Conservation Authority (NEECA) erstwhile known as the National Energy Conservation Center (ENERCON) was able to launch a Voluntary Energy Scheme starting from the Fans. Due to the close affiliation with the fan manufacturers & respective association, already adopted fan standard by the PSQCA and an accredited fan testing lab of PCSIR, the scheme kicked off. However, it is pertinent to look into so many factors for each appliance labeling regime to be successful as exhibited in the image. While energy labels play a crucial role in identifying sustainable appliances, they are just one of many factors to consider when making an informed decision. Other important considerations include material usage, durability, reparability, and end-of-life recycling options. Promulgating regulations without the Energy Conservation Tribunal bypasses crucial technical, economic, and fairness considerations, potentially leading to ineffective and legally questionable regulations.

Sr. No.	Country	Standards Body/ Organization	Implementing Agency
1	China	CNIS (China National Institute of Standards)	Centre for Quality Mark and Certification
2	Thailand	TISI (Thailand Industrial Standards Institute)	Energy Generating Authority of Thailand
3	India	BIS (Bureau of Indian Standards)	BEE (Bureau of Energy Efficiency)
4	Vietnam	VSQI (Vietnam Standards & Quality Institute),Ministry of Science &Technology (MOST)	Ministry of Industry & Trade (MOIT)
5	Indonesia	National Standards Agency (BSN)	Ministry of Energy & Mineral Resources
6	Sri Lanka	Sri Lanka Standards Institution	Sri Lanka Sustainable Energy Authority
7	Pakistan	Pakistan Standards & Quality Control Authority (PSQCA)	NEECA & Provincial Designated Agencies

Implementation of MEPS & Energy Labeling Regime in other Countries

Enabling Environment for Sustainable Appliances in Pakistan

Establishing an enabling environment for energy labels and eco-labels in Pakistan requires a comprehensive approach that encompasses accredited labs, local manufacturers' support, retailers, export growth, and technology support.

Accredited Labs

1. Strengthen Infrastructure: Enhance the capacity and expertise of existing accredited labs to effectively test and certify products for energy efficiency and environmental compliance. The Pakistan National Accreditation Council (PNAC) can start a national program for accreditation of public and private sector labs in Pakistan.
2. Expand Coverage: Increase the number of accredited labs across Pakistan to ensure accessibility and timely testing services for manufacturers and exporters. The development partners have not facilitated yet in this context. Under Article 10 of the Paris Agreement or G-2-G arrangements, the essential lab aspect could be covered. KOICA is facilitating in establishing Solar PV lab and USAID in establishing EVs lab in Pakistan.



3. Promote Harmonization: Encourage adoption of international standards and harmonization of testing procedures to facilitate global market access for Pakistani products.

Local Manufacturers Support

1. Awareness Campaigns: Raise awareness among local manufacturers about the benefits of energy labels and eco-labels, including cost savings, market advantage, and environmental responsibility.
2. Technical Assistance: Provide technical assistance to local manufacturers to help them understand the energy efficiency and environmental standards applicable to their products and guide them in implementing energy-efficient production processes. PCSIR may offer free testing services for first sample and give technical guidance to improve designs.
3. Incentive Programs: Implement incentive programs to encourage local manufacturers to adopt energy-efficient technologies and incorporate eco-friendly materials in their products. There should be no registration and labeling fee for the products to facilitate the manufacturers and ultimately the consumers.



Retailers

1. Educate Retailers: Train and educate retailers about energy labels and eco-labels, enabling them to effectively communicate product attributes to consumers and promote sustainable choices.
2. Incentivize Promotion: Encourage retailers to promote energy-efficient and eco-labeled products through discounts, special displays, and targeted marketing campaigns.
3. Collaborate with Retailers: Establish partnerships with retailers to showcase sustainable products and educate consumers about the environmental and economic benefits of making sustainable choices.



Export Growth

1. Market Research: Conduct market research to identify export opportunities for energy-efficient and eco-labeled products from Pakistan.
2. Compliance Assistance: Provide assistance to exporters in understanding and complying with international energy efficiency and environmental standards for their target markets.
3. Promotional Support: Offer financial and promotional support to exporters to showcase their energy-efficient and eco-labeled products at international trade fairs and exhibitions.



Technology Support

1. **Research and Development:** Invest in research and development to foster innovation in energy-efficient technologies and sustainable product design for Pakistani manufacturers.
2. **Technology Adoption:** Encourage the adoption of advanced energy-efficient technologies and sustainable manufacturing practices by providing financial incentives and technical expertise.
3. **Knowledge Sharing:** Facilitate knowledge sharing and best practices among manufacturers, researchers, and technology providers to accelerate the adoption of sustainable solutions in the industry.



Customer Requirements

1. **Consumer Awareness:** Enhance public awareness about the benefits of energy labels and eco-labels through educational campaigns and consumer-centric initiatives.
2. **Demand-Driven Approach:** Identify and understand consumer preferences and demand for energy-efficient and eco-labeled products to guide policy decisions and market development strategies.
3. **Label Transparency:** Ensure transparency and clarity in energy labels and eco-labels, providing consumers with easily understandable information to make informed choices. The success of the Labeling regime hinges on the Online Product Registration System (PRS) successful deployment and operationalization just like in another counter covering all appliances. Such PRS is not yet active in Pakistan. So far, the stickers QR code, serial number recalling, overt, covert and machine-readable features are being provided to the fan manufacturers only. The necessary rules & regulations have to be promulgated and energy conservation tribunal be established as per the provisions of the energy efficiency Act.



Financial and Tax Incentives

1. **Financial Support:** Provide financial assistance to manufacturers and retailers to offset the initial costs of adopting energy-efficient technologies and implementing eco-friendly practices. Removal of RD on basic essential components and raw material for manufacturing energy efficient appliances.
2. **Tax Breaks:** Offer tax incentives to manufacturers and consumers who purchase energy-efficient and eco-labeled products, promoting their adoption and reducing financial burdens.
3. **Investment Opportunities:** Encourage investment in research and development, manufacturing, and marketing of energy-efficient and eco-labeled products by providing favorable financial terms and investment opportunities. The NEECA and its Provincial Designated Agencies have to be given financial and technical resources for developing an enabling environment for long term success of labeling interventions across Pakistan.



Job Generation

1. Green Jobs Creation: Support the creation of green jobs in the manufacturing, installation, and maintenance of energy-efficient and eco-friendly products and technologies.
2. Skills Development: Invest in skills development programs to equip the workforce with the necessary expertise to design, manufacture, and maintain sustainable products and technologies.
3. Entrepreneurial Support: Provide support and encouragement to entrepreneurs and small businesses that specialize in sustainable products, services, and technologies.



Bulk Procurement Government Programs

1. Government Procurement: Implement preferential procurement policies for energy-efficient and eco-labeled products within government agencies and public institutions. Punjab Energy Efficiency & Conservation Program with the name of Punjab Energy Efficiency & Conservation Agency (PEECA) designated as Provincial Designated Agency under the National Energy Efficiency Act issued advisory for public procurement fans and subsequently the Energy labeled fans were added in the MRS list.
2. Bulk Procurement Initiatives: Encourage bulk procurement programs for energy-efficient and eco-labeled products by public institutions and private companies, leveraging economies of scale to reduce costs and promote market adoption. PEECA carried out the efficient fans' replacement program at large scale level.
3. Public-Private Partnerships: Foster collaboration between the government and private sector to develop innovative bulk procurement mechanisms for energy-efficient and eco-labeled products, ensuring a sustainable supply chain.



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