## Manufacturer Impacts from Appliance Standards and Labels

CLASP is conducting research into the impacts of appliance energy efficiency policies on product manufacturers. The findings from this study will be documented in a forthcoming publication from the International Finance Corporation (IFC) called "A Greener Path to Competitiveness."

The study identifies a number of cases where S&L policies, sometimes in combination with complementary measures, not only achieved their primary objectives of energy use and emissions reductions, but also strengthened domestic manufacturing. Manufacturer impacts vary in size and type, depending on the particulars of the situation.

Cases were drawn from the experiences of countries that have mature S&L programs such as India, Korea, Switzerland, and the United States. While it would be useful to also present cases drawn from economies with nascent S&L programs, such programs have not existed long enough to understand what impacts their policies have had on manufacturers. Another important factor in the selection of cases was the relative strength of the "signal". In other words, is it possible to see the effect of the EE policy, which is just one of many factors at play in a given industry? Teasing out the impact of policy proved particularly challenging. As a result, our findings tend to be more suggestive than conclusive.

The authors consulted a range of sources to understand the dynamics of each case, including shipment and import-export data, financial reports, government officials, industry representatives, and consultants. Rather than working from a pre-determined list of metrics, an open-ended research method was employed in an effort to uncover whatever manufacturer impacts a given policy (or suite of policies) may have had in any given case.

In some cases, forward-looking appliance policies have spurred innovation and led to the creation of new markets, as in the case of heat pump clothes dryers in Europe. Supporting policies, especially government procurement, were a key ingredient in the uptake of heat pump clothes dryers.

In other cases, policies have enabled manufacturers in that country to better compete in the domestic market, as in the case of white goods manufacturers in the United States and air conditioner manufacturers in India. The U.S. production tax credit was built on the foundation of pre-existing S&L policies for white goods, while in India it was the introduction of a categorical label for ACs that unlocked innovation and boosted domestic production of high-efficiency products.

In yet other cases, policies have been used to improve the quality of the products produced by that country's manufacturers and increase access to foreign markets, as in the case of lighting policies in China and refrigerators in Mexico. In both cases, S&L policies were strengthened to align with those in major foreign markets, so domestic manufacturers' incentives all pointed toward higher efficiency.

In all cases, policy not only led to improvements in product efficiency, which deliver real consumer benefits, but also spurred innovation and boosted competitiveness within the manufacturing community.