

# Popularization Factors of Eco-Friendly Products

ATSUO ISHIKAWA

This paper discusses three examples that were studied to identify the factors for popularizing eco-friendly products. Popularization was found to require political, social and technical motivation that originated in social needs, and that the technology selected by the market must be distinctive. This paper also looks at eco-friendly technologies as either basic technologies inherent to the products themselves or as added or incidental technologies.

It was learned from the studied examples that, with solar power generation, the time required to recover one's initial investment was important towards popularization. Additionally, not only price but also the availability of subsidies impacted popularization and surplus power buy-back programs were a motive for investing in solar power, hence the ends justified the means. These trends explain why manufacturers of solar cells that contain hazardous substances have become the world's top manufacturers. In the example of the USA's Clean Air Act, the probability of eco-friendly technology being adopted was pinpointed by identifying market needs based on the differing strategies of Japanese and American automotive manufacturers that once again are competing as leaders vs. challengers. In the example of the Prius, Toyota has dominated the hybrid market for about six years while other manufacturers have taken a wait-and-see attitude, but this is where there seems to be difference in how technologies for eco-friendly products are looked at.

A conceptual model of popularization factors is proposed, based on the market needs for eco-friendly technologies identified from these examples and judgments as to whether these technologies are added/incidental technologies or basic technologies.