Biomass Industry in Japan

U.S. Commercial Service Japan

Summary

In 2004 the Government of Japan initiated a national campaign called “Biomass Japan”. The initiative is part of Japan’s effort to create a sustainable society, and has multiple objectives including addressing global warming, increasing the recycling of existing biomass resources (unused and/or organic waste) to improve energy self sufficiency, decreasing costs related to pollution control, revitalizing farming and fishing villages, and facilitating the development of unique and competitive new technologies and industries for the world market.

Since the initiation of the campaign, the Japanese biomass market has been developing in ways quite unlike that of the U.S. and other world markets. The biomass market in Japan depends primarily on processing waste materials, as opposed to industrial biomass such as growing switch grass, corn or the like. There are no largescale bio-ethanol or biodiesel production projects planned in Japan. Instead, there are numerous small-scale local biomass utilization projects initiated mainly by local governments, designed with unique characteristics to meet specific local needs. As a result, individual projects tend to be quite small, the preponderance of any given technology limited, and the total value and return on investment may not be determined solely by economic performance but also by other factors that take into consideration the overall benefit to society.

These factors pose challenges to foreign firms wishing to compete in the Japanese biomass market. American firms with biomass technology that are interested in approaching the Japanese market should consult with CS Japan as early as possible in their strategy and planning process.

Market Demand

In 2004, the Government of Japan initiated a national campaign, “Biomass Japan”, as part of its efforts to create a sustainable society. Since then, there have been many programs initiated to promote biomass usage, with a number of different objectives, including addressing global warming, increasing the recycling of existing biomass resources (unused and/or organic waste) to improve energy self sufficiency, decreasing costs related to pollution control, revitalizing farming and fishing villages, and facilitating the development of unique and competitive new technologies and industries for the world market.
Since the initiation of the campaign, the Japanese biomass market has been developing in ways quite unlike that of the U.S. and other world markets, particularly with regard to the following market characteristics. First, biomass utilization projects are typically initiated by local governments as opposed to private firms. The number of local Japanese governments that have declared themselves “Biomass Cities” in on the rise, as shown in Table 1 below. Out of approximately 1,700 local governments, about 15% of them have already established their own biomass utilization program, and there is an increasing trend in recent years.

By originating from local governments and designed to meet specific local needs, biomass utilization projects tend to be small, and may use any number of different organic resources and a similarly wide range of technologies to treat them. Thus, the use of any given organic resource and the demand for any given appropriate technology is often limited. Technologies that can be applied in small-volume operations are often preferred.

In addition, the value of a given project is not always viewed in terms of economic performance. For one example, in 2008 the City of Kyoto initiated the largest biodiesel fuel production facility in Japan by using used food cooking oil. However, as the cost of collection of used oil from households and restaurants is so high, the city relies on the grassroots volunteer activities of local non-profit organizations to collect the used oil. The city now uses biodiesel to fuel its public bus operations. But because of the small scale of the project, the production cost of the biodiesel is higher than regular diesel or other fuels. While on face value the project appears uneconomical, in estimating the overall value of the project the city also considers other factors, such as cost savings and reduced pollution (dioxin from incineration and stress on sewage systems from liquid disposal) from simply disposing of used cooking oil.

By Koji Sudo

Read the full market research report