Biofuels are needed as part of the future energy mix to address security of supply as well as the environmental challenge. Policy makers in more than 65 countries around the world have developed or are developing renewable fuels policies. These policies are not all related directly to the environmental challenge, but can also be driven by security of supply concerns, or by local domestic economic concerns, such as agriculture. Because the scale of the energy system is so huge, it takes time to build the human and industrial capacity to achieve substantial deployment of new technologies including the advanced Biofuels. We will describe the challenges and opportunities for Biofuels and highlight specific drivers for successful Biofuel production scale-up.