

Ongoing Success Stories in the Industrial Sector

Industrial energy consumption is expected to increase 43% by 2010, the largest increase of the three end-use sectors. Two factors contributing to this projection are an increase in industrial use of electricity and a leveling off of the trend toward more energy-efficient process improvements. The impact of these two factors is somewhat mitigated by a shift in the U.S. industrial mix toward less energy-intensive products.

To address the energy conservation needs of this key economic sector, the Office of Conservation and Renewable Energy sponsors research aimed at improving the energy efficiency of industrial processes and energy conversion equipment, develops systems for the simultaneous production of electricity

and process heat (cogeneration), and explores the potential of technologies that can use multiple or alternative fuels. DOE also ensures that the technologies it develops are environmentally sound, and it is particularly active in technology transfer activities designed to assist small- and medium-sized industrial facilities in analyzing their energy use.

Catalytic Distillation

The petroleum refining and petrochemical industries often use equilibrium reactions to produce hydrocarbons. Equilibrium reactions tend to be energy intensive because, once equilibrium is reached, the product must be removed through



Membrane distillation can replace heat processes used to recover solvents in the petroleum refining industry.