Chimneys in Loches, France, (Left) and in Black Hill, England (Right). (Photos by Mary Knowles.)

houses on uneven streets. At other times, as in the industrial English town of Black Hill, the same chimney repeats endlessly on the skyline, conveying the force of mechanization. In either case, whether random and separate or ordered and common, the chimney symbolizes shelter the world over.

Architects have learned to use the chimney and the fireplace as artistic expressions. Chambord Chateau in France is an extreme example. When seen in the distance, it appears like a crystalline uplifting in the landscape. Close up, chimneys crowd together with other devices to make a sort of hanging sculpture garden. Some of the other devices are useful: dormers to admit light, and sheltering domes over small lookout platforms or interior spaces. Others

Chambord Chateau, France.

seem to have no purpose at all other than to complete an imagined picture of opulence and power.

Inside great houses, chimneys connect to elaborate ceramic stoves. Such opulence was typical of royal palaces and houses of the very rich. The stove has no door exposed to the living quarters. It is serviced entirely from a small space behind the walls. Fuel is fed in and ashes cleaned out, servants maintaining the fire that is enjoyed but otherwise unseen and unattended by the elegantly dressed family. Served and servers, the two groups go by each other, mostly unseen, in separate passages through the house.

Decorated Ceramic Stoves: (Top) Hofburg Palace, Vienna; (Bottom) Zurich Museum, Switzerland.

Off-Site Combustion and Centralized Control

Recent technologies have allowed us to move the fire outside a building, sometimes to extremely remote sites, and send it back in different forms to heat, cool, and light our buildings. The heat of combustion has variously been converted to hot water, steam, and, most recently, electricity for cooling as well as heating. We have gained design choices but we have lost a powerful link with the rhythms of nature that traditional adaptations once celebrated. We do not have to revert to the old ways but, for many good environmental reasons, we do need to find alternatives that offer the same benefits.

Today, energy is converted in great power plants and then sent regionwide through wires that hum with inefficiency. Unlike the traditional stove or fireplace, such vast systems, often covering several states, require a high degree of centralized control. And even after the energy gets to its destination, control may be automatic or may lie in the hands of unseen others.

We all know by now that the downside of this practice has been environmental damage, price manipulation, and high vulnerability to system failure and even terrorist attack, but a clear upside is