

**ENERGY CONSUMPTION**  
**Outcome: Improve Air Quality**

**Countywide Planning Policy Rationale**

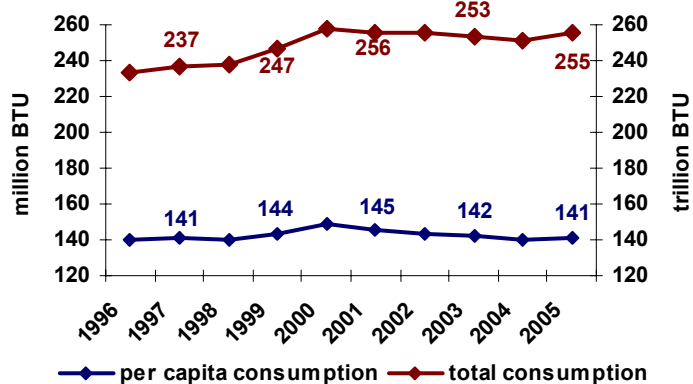
"In cooperation with water and electricity providers, local jurisdictions, including sewer and water districts, shall encourage programs for...power conservation in public facilities and in the private sector." (ED - 11) "Aggressive conservation efforts shall be implemented to address the need for adequate supply for electrical energy and water resources, and [to] achieve improved air quality. Efforts shall include, but not be limited to, public education...conservation credits, and energy efficiency in new and existing buildings." (CO, 6)

Total energy consumption in King County increased nearly 10% from 1996 to 2005. Total energy consumption peaked in 2000, declined over the following four years and again increased slightly in 2005. When adjusted for population growth, per capita energy consumption increased less than 1% in the same time period as shown in figure 11.1.

**Non-Petroleum Energy** Per capita consumption of non-petroleum energy (electricity and natural gas) has increased nominally since 1986, driven by an 11% increase in natural gas usage while electricity consumption decreased by almost 5%. Since 1986 natural gas has represented an increasing share of the consumed non-petroleum energy in King County, from 43% in 1986 to 47% in 2005.

Figure 11.1

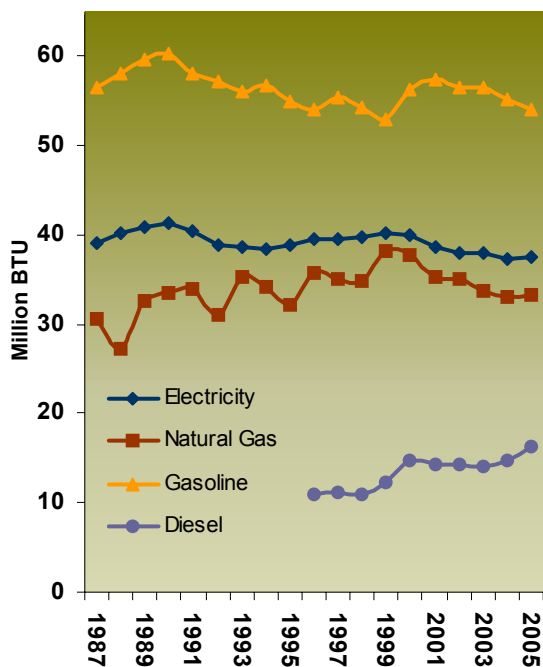
**King County Per Capita and Total Energy Consumption**



After peaking in 1999, per capita consumption of non-petroleum energy declined steadily through 2004, possibly due to a recession which decreased commercial activity and natural gas needs as well as aggressive conservation programs implemented by utilities. Reversing that trend, both electricity and natural gas consumption increased about 1% in 2005.

Figure 11.2

**Per Capita Energy Consumption by Type: King County 1986-2005**



Non-petroleum energy is consumed predominantly for residential and commercial uses. In 2005, 86% of the non-petroleum energy consumed in King County was for residential and commercial uses. Another 14% was consumed for industrial purposes. Only a fraction was consumed for other purposes including transportation.

**Petroleum Energy** As shown in Figure 11.2, per capita gasoline consumption has pursued a see-saw path with an eventual decrease since 1986. Two peaks in consumption occurred in this time period, the first in 1990 (at 1.32 gallons per day) and a second in 2001 (at 1.25 gallons per day). Since 2001, gasoline consumption has decreased nearly 6%, dropping to 1.18 gallons per day per person in 2005. In contrast, per capita consumption of diesel fuel increased over 14% in the same time period, consistent with the increase of freight movement via commercial truck traffic. Diesel fuel usage has steadily assumed a greater share of petroleum energy usage since 1996, driving the increase in petroleum consumption in the last decade.