Twenty goats, aged 7 months and weighing between 13 and 18 kg, were given diets containing 0, 20, 40 and 60% coffee pulp and hay *ad libitum* for 20 weeks. Metabolizable energy (ME) intake was estimated *in vitro* during 12- and 8-week periods and related to liveweight gain in a regression involving 40 sets of data. A maintenance requirement of ME 556 kJ kg^{-0.75} day⁻¹ was calculated, which was similar to some reports in the literature but exceeded others by 20%. Less variable was energy cost of gain which was estimated at 27.9 kJ ME per g. Efficiency of utilization of ME for growth was 35.8%. Values reported here are useful for feeding Kenyan goats under confinement.