

# THE EFFECT OF EQUIPMENT OVERSIZING ON EFFICIENCY

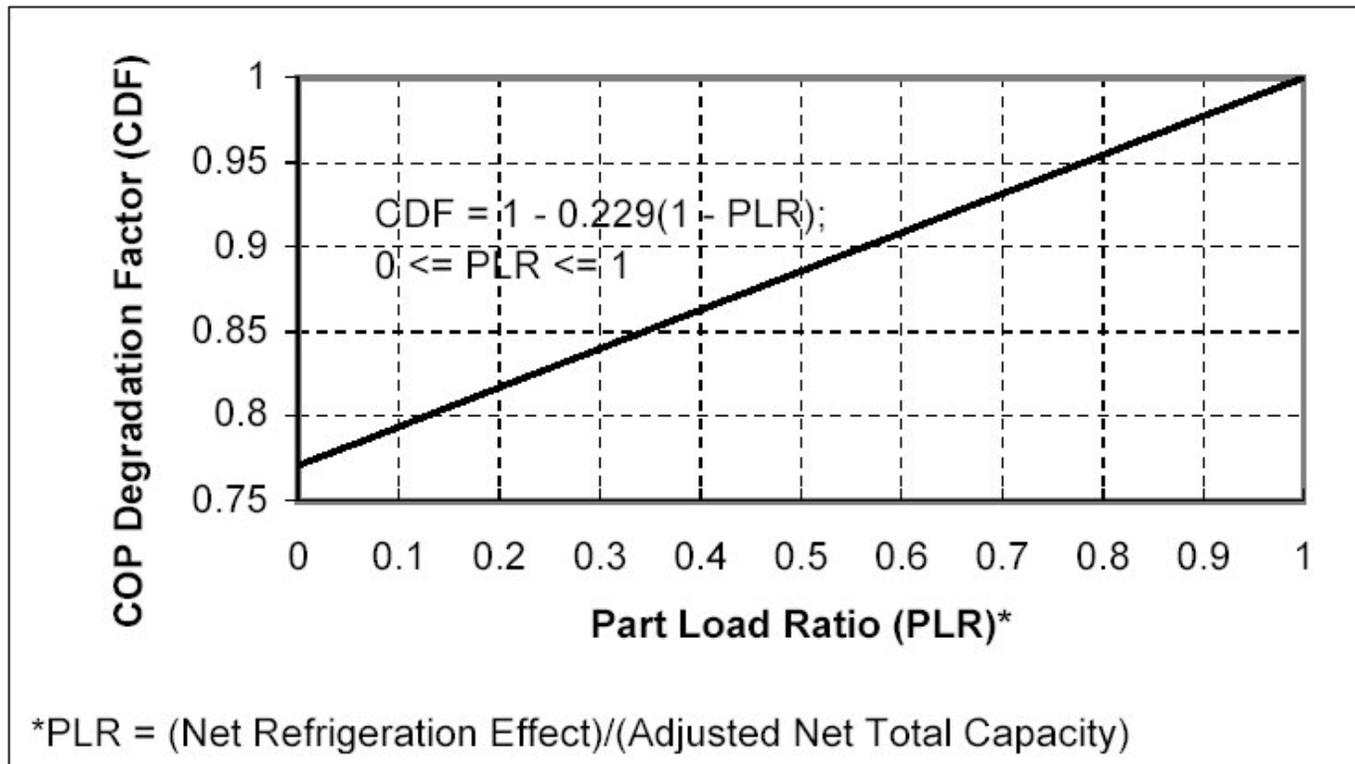


Figure 1-3. Cooling equipment part load performance (COP degradation factor versus PLR)

(Note: COP = SEER / 3.412)

**Example:** Using three ton equipment on a structure with only a two ton heat load is a PLR of 0.66, and results in a 0.922 reduction of SEER, in that case a 13 SEER rating would then derate to a 12 SEER rating.

Source: Neymark J.; Judkoff, R. (2002). *International Energy Agency Building Energy Simulation Test and Diagnostic Method for Heating Ventilating and Air-Conditioning Equipment Models (HVAC BESTEST), Volume 1: Cases E100-E200*. NREL/TP-550-30152. Golden, Colorado, US: National Renewable Energy Laboratory. Available from <http://www.nrel.gov/docs/fy02osti/30152.pdf>.

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