

$$\begin{aligned}
 P_{\text{TOTAL}} &= \underbrace{P_{\text{DYNAMIC}}}_{C_L V_{\text{DD}} V_{\text{SWING}} f + V_{\text{DD}} Q_{\text{SC}} f} + \underbrace{P_{\text{STATIC}}}_{V_{\text{DD}} I_{\text{LEAKAGE}} + V_{\text{DD}} I_{\text{THROUGH}}} \\
 &= \text{CAPACITIVE-LOAD POWER} + \text{SHORT-CIRCUIT POWER} + \text{LEAKAGE POWER} + \text{STATIC NONLEAKAGE POWER}
 \end{aligned}$$

Figure 3 Low-power design is all about reducing dynamic power or leakage power in the total-power equation.
