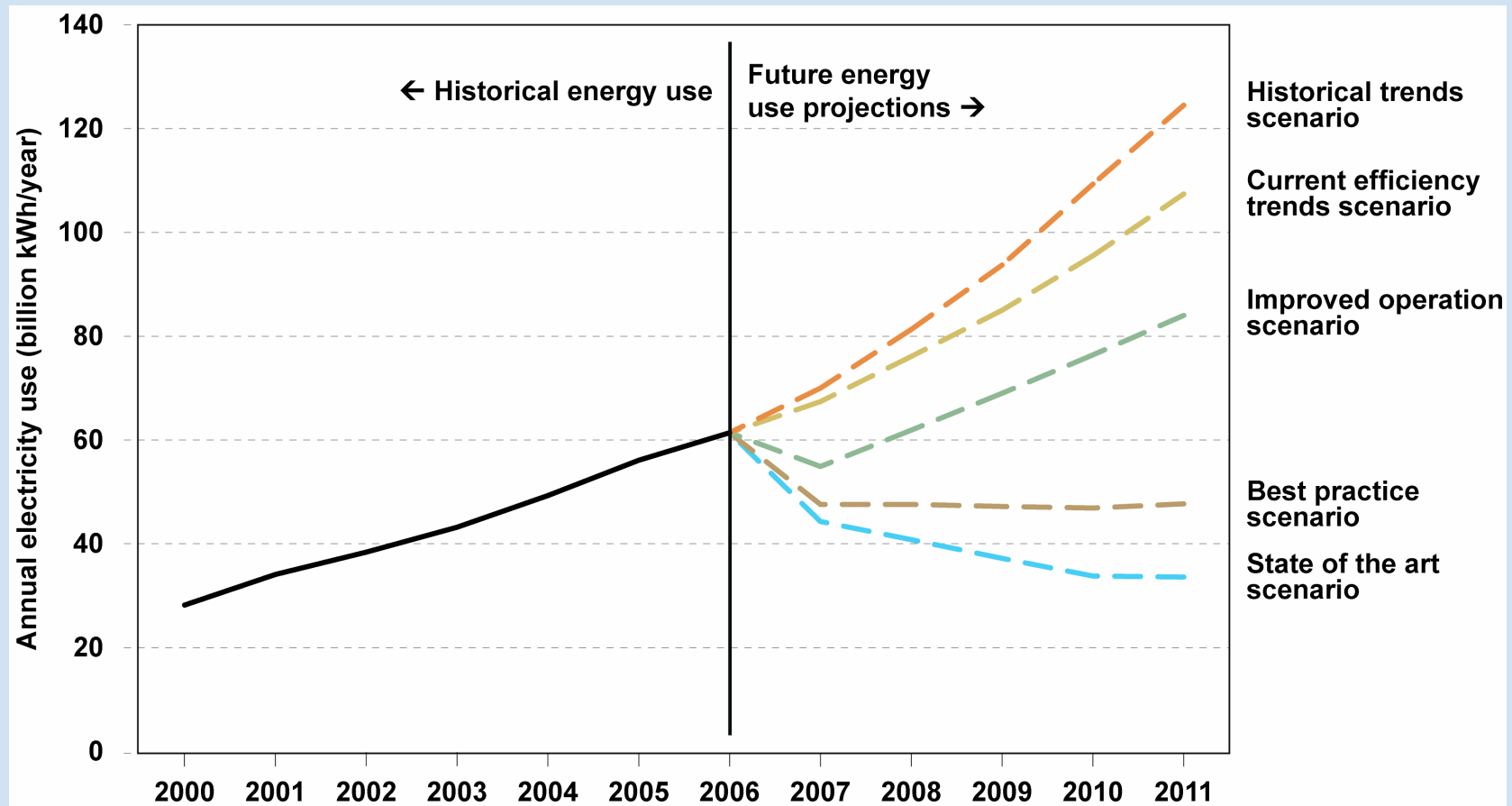


Data Center Energy Trends

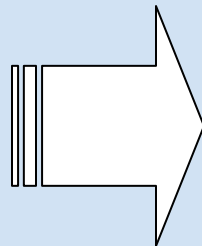


Source: EPA Report to Congress (2007)

CEE Data Centers Initiative

Challenges

- Lack of commonly accepted efficiency definitions, metrics and test procedures
- Budget separation, IT pays for equipment, facilities for energy
- Risk aversion – reliability and uptime concerns trump others
- Dynamic nature of software and hardware markets, operations



CEE Initiative Objectives

- Developing, supporting consensus-based definitions and performance specs
- Facilitating our collective understanding of opportunities, market players & industry motivations
- Identifying recommended program strategies to help move more of the market to a preferred outcome

CEE Data Centers – Progress

1. Consensus-based definitions, performance specs	Server def'n, metric, spec (EPA, SPEC); DC benchmarks (EPA, DOE, TGG)
2. Collective understanding of opportunity, players, industry motivations	Program info sharing; Industry, government agency engagement (DOE, EPA, TGG)
3. Recommended common program strategies	8 CEE members running DC programs/pilots; Draft program “model”; Tools becoming available



Working Together, Advancing Efficiency