

**HOW TO USE THE TIME LINE:**

This time line is to be used by Federal project managers to remind them when they should be thinking about low-energy, sustainable design during the various phases of planning, design, construction, and turnover of a building. Without explicit actions throughout the process, the resulting buildings will often not meet the owner's requirements and expectations. Because each agency has its own terms for these phases, the time line uses the traditional American Institute of Architects (AIA) terminology and notes the stages at which Federal agencies often demand milestone submissions (15%, 35%, 50%–60%, and 95%). During each of these stages, there are very different opportunities to ensure, or to lose, low-energy sustainable design. This guidebook is focused primarily on low-energy issues and recognizes that low-energy does not equal sustainability. Comprehensive sustainability includes many other issues such as water use, indoor environmental quality (IEQ), and green materials.

It is assumed that whatever agency you are in already has specific directives for facility managers that provide guidance for procuring low-energy, sustainable buildings and facilities. These directives might range from general guiding principles to more specific energy and water use targets, foot-candle levels, requirements for using renewable energy sources, and even materials criteria for each building type. It is conceivable that there might be some existing policies that are contrary to your newly emerging low-energy, sustainable goals, and these should be recognized and eliminated if at all possible.

You will need a unique perspective, one that relies on a whole-building approach to the problem. The time line suggests potential steps that will help you realize your goal of a low-energy (and a sustainable) facility. The time line will show you some new steps you will incorporate into your thinking, planning, and budgeting steps that are not needed in the traditional design process. For example, you will see the requirement for an energy champion and several stages where you have to conduct some evaluations to really understand the consequences of some very complex tradeoffs. You must be clear about the costs to have "extra" people (like the energy champion) on the job or additional costs to perform the necessary evaluations and include them in your budgets from Day One.

There will be some new roles and responsibilities if you expect to deliver a low-energy, sustainable building; you will need to state your expectations clearly and give your team the resources and the authority they need to accomplish the goals on time and within budget.

Refer to the section called "How to Apply," which follows the time line. This section provides the details about which low-energy strategies should be considered during each phase. Each one notes Description, Goal, Best Applied, How to Do It, Related Strategies, and Comments for that strategy.

