

Guide to Resource Planning with Energy Efficiency

This Guide to Resource Planning with Energy Efficiency (‘Guide’) describes the key issues, best practices, and main process steps involved in using energy efficiency as a utility resource.¹ The Guide has been written in support of the National Action Plan for Energy Efficiency (‘Action Plan’), and specifically to supplement Chapter Three of the Action Plan, which discusses existing successful planning processes and concepts.² To help achieve the Action Plan’s goal of encouraging a renewed national commitment to energy efficiency, the Guide provides an entry point for utility analysts, state agency staff, and policy-makers to understand the process and analysis required to integrate energy efficiency into utility resource planning.

The Guide is written in ten sections, with each section focusing on an important step in the process and the associated technical issues, best practices, and information resources. When correctly planned and implemented, the methods described here help ensure that energy efficiency programs can provide a resource as “hard” and valuable to utilities and their customers as any on the supply side. Since there is often more than one way to approach these tasks, the best choice is generally the one that works best with existing practices, the institutional structure in place, the experience level of the teams doing the analysis and developing the programs, the time and budget available, and not least, the data available. With this in mind, the steps and techniques described in the Guide should be understood as a starting point from which to tailor an approach that best fits conditions and existing planning processes for a given utility or jurisdiction.

This Guide should be of interest to several different types of reader. Above all, it is meant to help utility resource planners who are early in the process of integrating energy efficiency into resource planning and have questions about how to proceed. Second, it is meant to help those concerned with oversight of utilities, such as public utility commissions and city councils, to ask the right questions and understand the key issues when reviewing utility resource planning decisions. Finally, it is meant for members of the general public and other stakeholders who are increasingly concerned with how to promote energy efficiency in resource decisions, as evidenced by the broad interest and participation in the Action Plan. We hope that this document will be useful for all Action Plan participants, for its direct application to their efforts, and also as an educational resource that they can take back to their city, state or region.

Sections

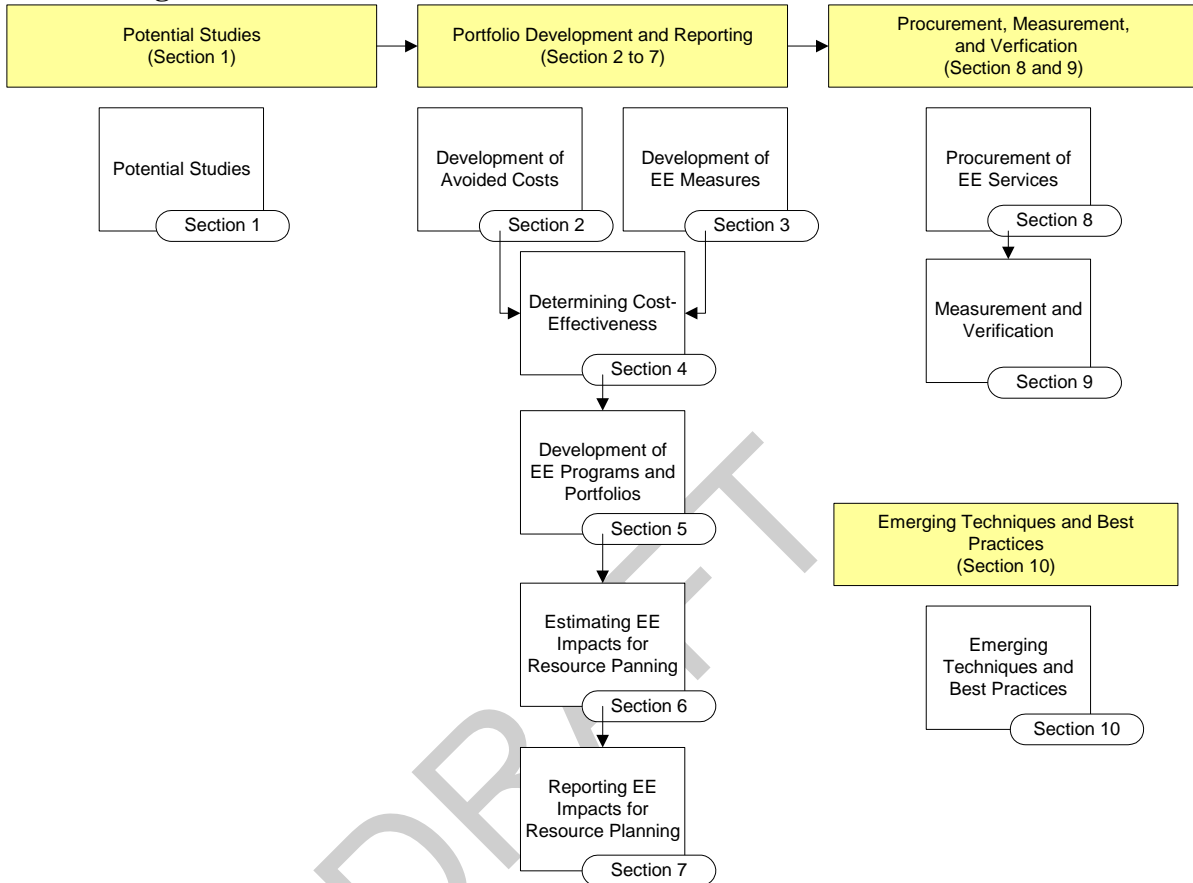
The following diagram shows the topics addressed in the Guide and their overall relationship in the energy efficiency planning process. There are three main topic areas

¹ A utility is broadly defined as an organization that delivers electric and gas utility services to end users, including, but not limited to, investor-owned, publicly-owned, cooperatively-owned and third-party energy efficiency utilities.

² See http://www.epa.gov/cleanenergy/pdf/napee/napee_chap3.pdf for Chapter 3 of the National Action Plan for Energy Efficiency.

that generally occur in sequence: energy efficiency potential studies, portfolio development and reporting, and procurement and measurement.

Overall Organization of the Guide



(1) Development of energy efficiency potential studies (Section 1). Section 1 describes the standard practices employed in potential studies, including methodologies for analyzing technical, economic, and achievable potential. Potential studies are generally the starting place in designing energy efficiency programs and incorporating them into resource planning. There are three main types of potential studies: (1) a high level **policy study** to set program goals and budgets, and make the policy case to initiate or expand an energy efficiency program; (2) a **scoping study** to identify energy efficiency alternatives to supply-side investments including generation, transmission, or distribution; and (3) a detailed **program-design study** to identify the best mix of energy efficiency measures to offer to customers. Each type of potential study is described in the Action Plan Guidebook on Conducting Potential Studies (<http://www.epa.gov/cleanrgy/actionplan/eeactionplan.htm>).

(2) Energy efficiency portfolio development and reporting (Sections 2 to 7). Energy efficiency portfolio development is a mix of generating good ideas about opportunities for energy efficiency, evaluating cost-effectiveness, continuing established programs, offering programs to a full range of customers, and communicating expected reductions

to energy procurement and planning. These sections describe the details in developing the energy efficiency portfolio and reporting on program results.

(3) Procurement, measurement, and verification (Sections 8 and 9). Implementation of the energy efficiency portfolio is critical to the overall success of the programs. These sections provide information on procurement of energy efficiency services and tracking overall performance through measurement and verification (M&V).

In addition to these three topics, the Guide includes a discussion of emerging best practices including coordination of each resource planning function and greenhouse gas (GHG) emissions reductions (Section 10).

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