

US EPA ARCHIVE DOCUMENT

Primary Electric System Benefits from Clean Energy Measures				
Electric System Benefit	Applicable Clean Energy Resources	Considerations for Determining Whether to Analyze	Who Usually Conducts Analysis?	When is Analysis Usually Conducted or Made Available?
Avoided electricity generation or wholesale electricity purchases	• All resources. • Resources that operate during peak hours.	• Traditionally analyzed in cost-benefit analysis. • Widely accepted methods. • Data generally available but expensive. • Models available but are complex, not transparent, and are often expensive to use. • Many assumptions about technology, costs, and operation needed. • Long term fuel price forecasts must be purchased or developed.	• Utilities conduct in-depth modeling. • PUCs and other stakeholders review utility's results and/or conduct own analysis. • RTO/ISO and the Independent Market Monitor. • US EIA and private consultancies provide electric dispatch and capacity expansion forecasts.	• Resource planning and released regulatory proceedings. • Area-specific DSM program development. • RTO/ISO avoided cost estimates may be published on regular schedules.
Avoided power plant capacity additions	• All resources. • Resources that operate during peak hours.	• Traditionally analyzed in cost-benefit analysis. • Generally accepted methods for both estimation and simulation. • Some assumptions about technology, costs and operation needed. • Data generally available .	• Utilities conduct in-depth modeling. • PUCs and other stakeholders review utility's results and/or conduct own analysis. • In some regions, RTO/ISO publishes capacity clearing prices.	• Resource planning and proceedings. • Area-specific DSM program development. • RTO/ISO avoided cost estimates may be published on regular schedules.
Deferred or avoided T&D capacity	• Resources that are close to load, especially those that operate during peak hours.	• Traditionally analyzed in cost-benefit analysis. • Load flow forecast availability. • Unit cost of T&D upgrades can be estimated but may be controversial. • T&D capacity savings reasonably practical, but site-specific savings difficult to generalize.	• Utilities conduct in-depth modeling. • PUCs and other stakeholders review utility's results and/or conduct own analysis. • RTO/ISO.	• T&D build planning. • Area-specific DSM program development. • RTO/ISO costs estimates may be published on regular schedules.
Avoided energy loss during T&D	• Resources that are close to load, especially those that operate during peak hours .	• Traditionally analyzed in cost-benefit analysis. • Straightforward; easy to estimate once avoided energy has been calculated • Loss factor for peak savings may need to be estimated.	• Utilities collect loss data regularly and may conduct in-depth modeling. • PUCs and other stakeholders review utility's results and/or conduct own analysis.	• Resource planning and proceedings. • Area-specific DSM program development.