

Energy Efficiency Emerging Technologies (E3T) Overview

Bonneville Power Administration (BPA) Energy Efficiency is undertaking a multi-year effort for the identification, assessment and program uptake of emerging energy efficiency technologies. The main goal of Energy Efficiency Emerging Technologies (E3T) is that BPA engage in an ongoing collaborative effort to “fill the pipeline” with innovative energy efficiency strategies and technologies that promise significant region-wide energy savings.

What is an Emerging Technology?

An emerging technology (ET) is an innovative technology or solution, not in common use that promises a quantifiable increase in efficiency of electric energy end-use consumption or distribution within a consumer’s facility.

Through E3T, BPA seeks to collaborate with regional utilities, manufacturers and other stakeholders to identify, assess and disseminate innovative, highly valued, energy-efficient emerging end-use technologies and strategies to increase energy efficiency programs’ scope, impact and stakeholder satisfaction in the Northwest.

While there are many products entering the marketplace and developing efficiency strategies, only a subset of these will be evaluated through this process. The chart below identifies the scope of emerging technologies (or “measures”) under consideration by BPA:

Emerging Technology Scope for BPA Consideration

- Not yet assessed for nor included in BPA programs or measures
- Electric end-uses only
- Equipment and solutions (e.g. software tools, energy management approaches, including strategies)
- Retrofit and new construction
- Focus is energy efficiency, but can include on-site renewables and demand-side response/management
- All sectors, but with emphasis on widely applicable measures

E3T Process

Designed to efficiently evaluate potential new measures in the Pacific Northwest, the E3T process is the result of cross-disciplinary collaboration and stakeholder engagement. This process establishes a system for strategically identifying measures for implementation within BPA utilities’ service territories and involves the decision makers from key BPA departments early in the process.

E3T is funded and administered by BPA. E3T staff consists of BPA engineers, staff from the Washington State University Energy Program and Livingston Energy Innovations, with support from BPA Energy Efficiency programs, planning and marketing staff.

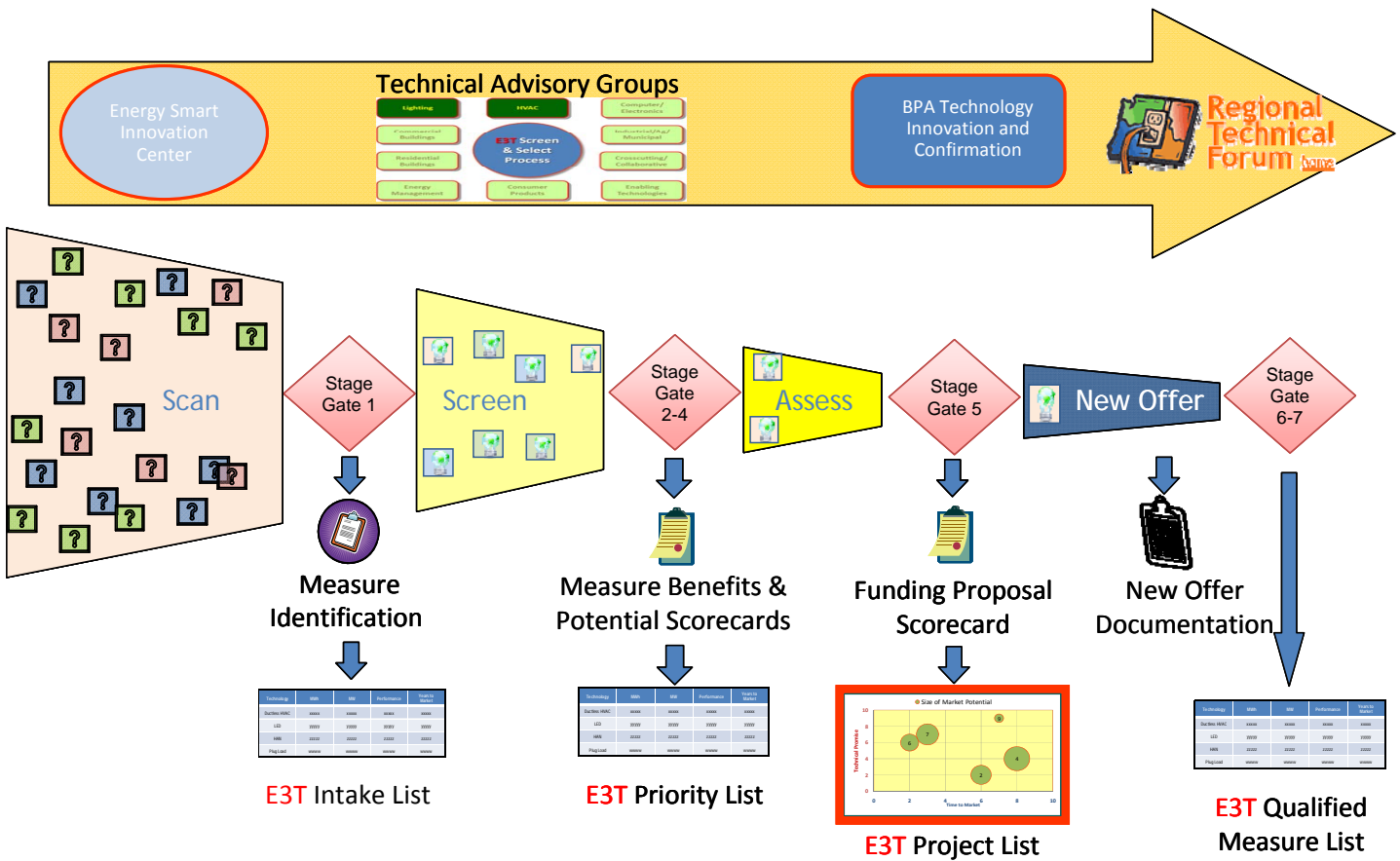


The E3T process includes extensive outreach to nationally prominent subject-matter experts through Technical Advisory Groups (TAGs), which are organized around key focus areas. The first two active TAGs, both started in Spring 2009, include:

1. **Lighting**— all sectors, including controls
2. **HVAC** — all sectors

The multi-step E3T identification and screening process includes:

- Step 1: **Measure Identification**
- Step 2: **Measure Benefits**
- Step 3: **Measure Potential**
- Step 4: **Action Plan and Assessment**
- Step 5: **New Offer**



Key features of this process include combining staff research with a structured team protocol for screening and prioritizing technologies. The process produces a portfolio of well-documented measures that will provide significant energy savings and meet the needs of BPA and its customer utilities throughout the Northwest.

All information gathered throughout the steps of the E3T process is archived as database “lists” forming a centralized repository of new energy efficiency measure documentation.

For more information about BPA Energy Efficiency Emerging Technology, contact [Jack Callahan](#), 503-230-4496.