

Spare Transformer Equipment Program (STEP)

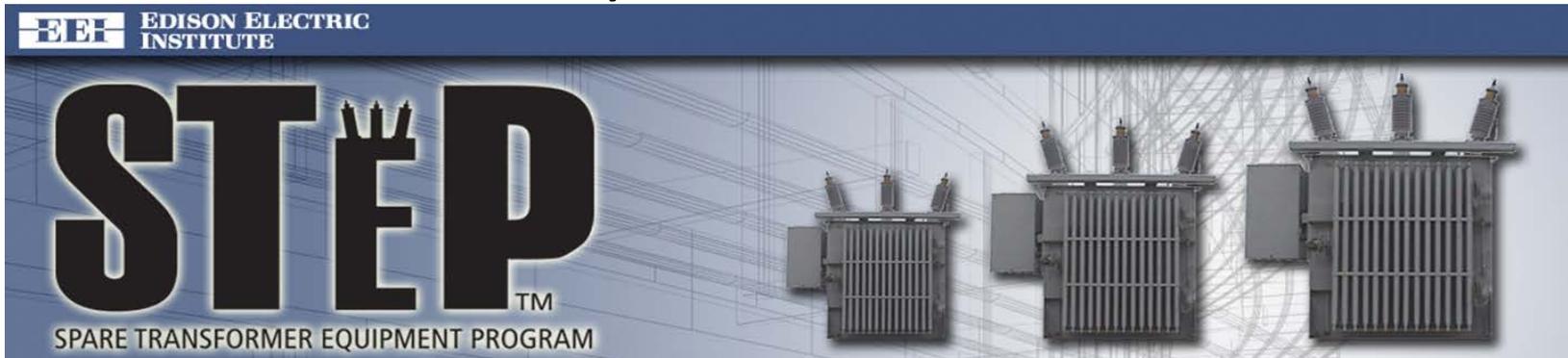
Public Service Commission of Utah – Technical Conference
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Let's turn the answers on.

Creation of STEP

- **2002:** EEI and federal agencies began to study issues associated in recovering from an attack to the electrical grid.
- **2004:** EEI proposal for transformer sharing program.
- **2005:** Sharing Agreement created.
- **2006:** STEP officially started.



Why Transformers?

- Following the 9/11 attacks, the electric industry recognized that one way to cripple the U.S. would be to disable the electric grid.
- Transformers were identified as the most vulnerable component of the system.
 - May take 6-18 months to manufacture and deliver
 - Can cost many millions of dollars



Sharing Agreement

- Binding contract between all participants that conveys the governance of the program.
- Developed with input from more than 50 utilities.
- Participating utilities commit to share spares if a “triggering event” occurs.

“Triggering Event”

- Coordinated acts of deliberate, documented terrorism, as defined in the Homeland Security Act of 2002, resulting in:
 1. Destruction or long-term disabling of one or more electric transmission substations, and
 2. Declaration of a state of emergency by the President of the United States pursuant to the National Emergencies Act.

STEP's Ability

- STEP enables participating utilities the ability to recover from the simultaneous loss of five of their substations.
- The program can support this level of recoverability for all voltage classes concurrently.
- Participating utilities can start additional voltage classes if members so desire.

Voltage Classes

- 500 – 230kV
- 345 – 161kV
- 345 – 138kV
- 345 – 115kV
- 230 – 138kV
- 230 – 115kV
- 230 – 069kV
- 138 – 069kV

Regulatory Approval

- FERC and state commissions have issued orders approving participation and cost recovery.
- PacifiCorp currently seeking approval in all six operating states.

STEP Involvement

- STEP participation is open to any transmission owner.
- Two face-to-face meetings are planned each year.
- Conference calls, as needed, to address business between meetings.
- Enrollment fee of \$10,000 and annual dues of \$7,500 per utility.

Committed Spare Transformers

- Each utility is obligated to commit a certain number of spares for each voltage class in which they are a member.
- The number of spares committed is based upon the size of the utility and their self assessment of their ability to recover from the loss of their five most critical substations per voltage class.
- PacifiCorp intends to commit *existing* spare units to meet its obligation.

Current Participants

- Allegheny Energy, Inc.
- Ameren Services Corporation
- American Electric Power Service Co.
- American Transmission Co. LLC
- Arizona Public Services Company
- Avista Corporation
- Bonneville Power Administration
- CenterPoint Energy
- Commonwealth Edison Company
- Consolidated Edison Company of NY
- Constellation Energy
- Dayton Power and Light Company
- Duke Energy Business Services LLC
- Duke Energy Carolinas, LLC
- Entergy, Inc.
- Idaho Power
- Indianapolis Power & Light
- ITC Transmission
- Kansas City Power & Light
- LG&E and KU Energy Services Co. LLC
- Michigan Electric Transmission Co.
- MidAmerican Energy
- New England Electric
- NextEra Energy (FPL)
- Niagara Mohawk
- Northeast Utilities Service Company
- Northern Indiana Public Service Company
- NSTAR Electric Company
- NV Energy
- Oklahoma Gas & Electric Services
- Oncor Electric Delivery Company
- Pacific Gas & Electric Company
- PECO Energy Company
- Pepco Holdings, Inc.
- PPL Electric Utilities Corporation
- Progress Energy Carolinas, Inc.
- Progress Energy Florida, Inc.
- Public Service Company of New Mexico
- Public Service Electric and Gas Company
- Puget Sound Energy, Inc.
- San Diego Gas & Electric Company
- Southern California Edison Company
- Southern Company Services, Inc.
- Tampa Electric Company
- Texas-New Mexico Power Company
- The United Illuminating Company
- Virginia Electric and Power Company
- Westar Energy
- Xcel Energy

STEP Participant Service Territories

