



### **Transmission to distribution interconnections**

We continue to receive numerous requests from LDC's for new transmission to distribution interconnections. These interconnection requests generally are categorized into one of four different types of projects:

1. *Constructing new T-D substations.* This type of interconnection typically involves constructing a new T-D substation to serve normal load growth. They are usually located adjacent to an existing transmission line which is tapped or looped into the new substation. However sometimes, from a Best Value Planning perspective, the optimum site for the new substation cannot be located adjacent to the transmission line and we are required to construct a transmission line to the new substation site. In these instances it may require a single circuit transmission tap to the new substation or it may require a new transmission line from two existing substations forming a new network line. Depending on the redistribution of the load and type of new interconnection, the transmission system performance may not be materially impacted. However, a new network line can have a greater impact on the transmission system performance.
2. *Adding T-D transformers at existing substations.* This type of interconnection involves expanding an existing T-D substation to accommodate a new T-D transformer. Typically, this type of interconnection is a way for a distribution company to increase capacity by lowering the loading on existing T-D transformers to meet increasing customer demand and/or to improve reliability by providing redundancy. The addition of the new T-D transformer typically does not materially affect system performance.
3. *Replacing existing T-D transformers at existing substations or substation rebuilds.* This type of project is not technically a new interconnection since it is typically just an increase in the transformer capacity to reliably serve increasing customer demand. This type of project may also include increasing reliability by replacing old infrastructure and/or equipment at an existing substation. This type of project typically does not materially affect system performance.
4. *Economic development projects:* This type of project is designed to accommodate a large new unforeseen load. These loads may include a new industry or an existing industry that is expanding their operation. Distributed generation is also included in some of these requests. Depending on the amount of generation and the load pocket it is connecting to the transmission system may absorb some of the generation during part or all of the year. However, there may be a need for other transmission system reinforcements, besides a new substation, to reliably serve the new load.

T-D interconnection requests that have been jointly evaluated to the point of Best Value Planning agreement between ATC and the LDC are shown in Figures PR-11 through PR-15 for Zones 1-5, respectively. A corresponding list of these interconnection requests is



# 10-Year Assessment

An annual report summarizing proposed additions and expansions to ensure electric system reliability.

# 2011

**September 2011 10-Year Assessment**  
**[www.atc10yearplan.com](http://www.atc10yearplan.com)**

available on ATC's Web site: [www.atcllc.com](http://www.atcllc.com). Those shown are on the Project Management worksheet of the D-T queue.