



**Date:** November 9, 2010  
**To:** Board of Directors  
**From:** Brad Jones, Technical Advisory Committee (TAC) Chair  
**Subject:** Emerging Technologies Integration Plan (ETIP)

**Issue for the ERCOT Board of Directors**

**ERCOT Board of Directors Meeting Date:** November 16, 2010

**Agenda Item No.:** 6e

**Issue:**

The ETIP (see Exhibit A) provides a status report on TAC activities related to integration of wind generation resources and other emerging technologies and recommends additional activities to improve emerging technology integration efforts. TAC unanimously endorsed the four (4) recommendations contained in ETIP Section 4.2, ETIP Recommendations, (explained in further detail in Section 2.3.3, Recommendations and Strategies), and requests the Board consider those recommendations, one of which recommends dedication of ERCOT Staff to certain emerging technologies integration efforts, and provide feedback to TAC.

**Background/History:**

The rapid and significant addition of Wind-powered Generation Resources (WGRs) to the ERCOT grid in recent years has raised a number of challenges. As TAC has addressed several of these issues through various revision requests, the Board has indicated a desire for TAC to develop a more holistic approach to the integration of WGRs and other renewable technologies.

As work on the requested integration plan developed, stakeholders realized many emerging technologies other than renewable generation resources have similar characteristics, such as variable energy output or limitations on dispatchability, which must be addressed. Accordingly, the document evolved from a renewables integration effort into a broader emerging technologies integration plan which more accurately captures the full array of potentially significant technical challenges and opportunities likely to be presented to ERCOT system planners and operators in coming years.

The ETIP identifies 69 discrete integration issues, 34 of which have been resolved through the stakeholder process and 35 of which remain under active consideration. The issues are described, categorized, prioritized, and tracked to ensure completion and transparency.

The ETIP contains four (4) recommendations for improving the TAC's emerging technologies integration effort:

1. Repurpose the Renewable Technologies Working Group
2. Place the new Emerging Technologies Working Group (ETWG) under the Wholesale Market Subcommittee
3. Improve the issues tracking system
4. Provide ERCOT Staff support for ETWG activities.



TAC has already taken action to implement the first and second recommendations. At its November 4, 2010 meeting, TAC unanimously endorsed all four (4) recommendations in ETIP Section 4.2, ETIP Recommendations, without prejudice to the ETIP document itself noting that the document has technical support for the recommendations and recommended the ETIP be advanced to the Board for its information and consideration. TAC did not specifically endorse the inclusion or exclusion of any particular emerging technology integration issue on the Issues List, nor did TAC specifically endorse the characterization of any issue on the list. The specific recommendations for how best to address each unique integration issue will be vetted through the stakeholder process. However, TAC believes the ETIP provides useful background information and contextual discussion of the suite of integration issues and requests the Board consider these issues and provide guidance to TAC's ongoing efforts to address emerging technologies integration challenges.

**Key Factors Influencing Issue:**

The Board has previously requested TAC provide a high-level overview of renewable technologies integration efforts.

**Alternatives:**

Provide comment and guidance to TAC on the ETIP, specifically on the four (4) recommendations for TAC organization of emerging technologies integration issues.

**Conclusion/Recommendation:**

TAC presents the ETIP for the Board's information and consideration. TAC requests the Board provide comment on stakeholder efforts to address emerging technologies integration challenges to date and specifically requests guidance on the four (4) recommendations contained in ETIP Section 4.2 (and further defined in ETIP Section 2.3.3).