CHARTER
INTERMITTENT RESOURCES TASK FORCE
SUBCOMMITTEE

MISSION

The Intermittent Resources Subcommittee (IRS) is an ongoing subcommittee established by the Market Implementation Committee (MIC) at its mm/dd/yyyy meeting. The purpose of the IRS is to provide a stakeholder forum to investigate and resolve Intermittent Resource specific issues and procedures in accordance with PJM stakeholder process protocols. The Intermittent Resources Task Force (IRTF) has been created to address market, operational, and reliability issues specific to intermittent resources as are assigned to it by the Market Implementation Committee (MIC). Intermittent resources are characterized by 1) a dependence on natural factors beyond the control of the resource operator for their energy production and 2) having little or no fuel or energy storage capability. Intermittent resources include, but are not limited to, wind and solar facilities.

RESPONSIBILITIES

The specific responsibilities of the IRTF are to:

1. Evaluate and recommend solutions to the following issues specific to intermittent resources:
   a. Operations & Reliability:
      i. Assess operational and reliability impacts in the event of high market penetration
         1. Review recommendations from the recently completed PJM Renewable Integration Study and present to the MIC a plan for how they ought to be addressed, if any. Schedule: Proposed approach presented to MIC by August 2014.
   b. Energy and Ancillary Service Markets:
   c. Capacity Markets:
   d. Interconnection:

2. Relative to item 1, recommend changes to the PJM Agreements as needed to implement market rule changes or provide clarity to existing rules.

3. Relative to item 1, determine if market rule changes recommended to the MIC require changes to the PJM Manuals and/or PJM Open Access Transmission Tariff, Operating Agreement, or Reliability Assurance Agreement.
1. Recommend improvements to PJM systems, tools, and procedures that ensure effective Intermittent Resource (IR) operations.

2. Investigate and resolve IR-related issues affecting PJM and its member companies as they arise in addition to IR-related assignments approved by the PJM Market Implementation Committee (MIC).

3. Review ongoing participation of IR resources and recommend reporting enhancements to ensure transparency in the market.

4. Monitor the status of other potential issues related to intermittent resources, and raise these to the MIC at the appropriate time:
   a. Pairing intermittent resources with more controllable resources, and how these are to be integrated into the market through commitment and scheduling in the day-ahead and real-time energy markets.
   b. Impact on intermittent resources of other PJM initiatives, task forces, and committees such as Demand Response Subcommittees.
   c. Load forecasting issues with respect to behind the meter intermittent resources such as solar thermal and solar photovoltaic.
   d. PJM Regional Transmission Expansion Planning processes and timelines that present potential barriers to the development of renewable energy resources required by some PJM states.
   e. Assessing and, to the extent reasonable, developing proposals addressing any operational and reliability impacts, positive or negative, in the event of high market penetration. Issues reviewed in conjunction with this include, but are not limited to: Load following and ramping; surplus off-peak generation; operating reserve requirements; restoration operation; and forecasting and unit commitment.

**ADMINISTRATIVE**

1. This subcommittee task force reports to the Market Implementation Committee. However, some of the issues to be addressed impact planning and operations and therefore will need to be vetted in other forums.

2. All PJM stakeholders may appoint representatives to the subcommittee task force.

3. PJM will designate a subcommittee task force chair person.

4. The chair and secretary will be responsible for preparing and issuing all reports, scheduling periodic meetings and conference calls as necessary and recording and preparing the minutes of each meeting.

5. Voting will be conducted on the basis of one vote per Member Company represented at meetings (either in person or via conference call). Opinions from non-PJM members on voting items will be recorded in the notes as requested.
6. Each member should have the authority to commit resources in order to support the requirements of the Intermittent Resources Task Force Subcommittee (IRSTF).