

## **PGT-06-13 Generator Transformer Programs (Inspection Procedures, Diagnostic Tools and Maintenance)**

### ***Project***

The reliability and availability of generator transformers needs to be improved by studying and adopting methods and techniques in manufacturing, on-line condition monitoring, and failure diagnostic tools.

### ***Participation***

*Management:* This project is proposed by India in association with utilities in the United States.

*Participants:* Participants from India will be design and quality engineers from utilities, transformer manufacturers and the Central Electricity Authority.

### ***Objectives***

To improve the reliability of generator transformers by necessary improvements in design, manufacturing techniques, selection of materials, and use of state-of-the-art on-line condition monitoring and maintenance and failure diagnostic tools.

### ***Performance Indicators:***

- Specification improvements.
- Quality improvements in manufacturing.
- Detection of fault inside the transformer at an early stage.

### ***Milestones***

Visit to utilities and transformer manufacturing shops in the United States to study:

- Manufacturing techniques.
- Condition monitoring systems and practices.
- Maintenance and failure diagnostic tools.
- Visit will also include meetings with experts.
- A study report to be made with detailed actions.

The major milestones are as below:

| Year   | 2006 |     |     |     | 2007 |     |     |     | 2008 |     |     |     | 2009 |     |     |     |
|--|------|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|
| Activities   | Q 1  | Q 2 | Q 3 | Q 4 | Q 1  | Q 2 | Q 3 | Q 4 | Q 1  | Q 2 | Q 3 | Q 4 | Q 1  | Q 2 | Q 3 | Q 4 |
| Finalization of Project Itinerary                                  |      |     |     |     |      |     |     |     |      |     |     |     |      |     |     |     |
| Visit to Plants in the United States and Discussions (5 days each) |      |     |     |     |      |     |     |     |      |     |     |     |      |     |     |     |
| Preparation of Study Report & Technical Specifications             |      |     |     |     |      |     |     |     |      |     |     |     |      |     |     |     |
| Implementation in Pilot Project                                    |      |     |     |     |      |     |     |     |      |     |     |     |      |     |     |     |

**Location**

*Activity Location:* Utilities/power stations and manufacturing/workshop facilities in the United States and India.

*Project Location:* Utilities in India in association with transformer manufacturers.

**Resources**

For the on-site study visits and discussions, the visitors will bear the travel expenses and hosts will cover the on-site costs.

The cost required for equipment and technology upgrades will be borne by the beneficiary utilities and manufacturers implementing the project.