

Customer Profile

NPCIL is one of the major power producers in India, having very ambitious growth plans. They intend to increase the installed capacity of power from existing 3,500MW to 15,000MW by 2012.

Problem Statement

The customer has requirement of Preparation of Terminal Lists in SmartPlant Instrumentation and Customization of Terminal List templates Cable Schedule's and Associate Schedule's for NPCIL's KAIGA-3&4, RAPP-5&6 units, each having a capacity of 220MW. NPCIL require SPI terminal list deliverables in exactly similar to there current format which NPCIL field engineers are familiar with. NPCIL also required Preparation of Cable Schedule's and Associate Schedule's

Rolta solution

Rolta has provided the following solution architecture to cater NPCIL requirements.

1. Intergraph's SmartPlant Instrumentation Version 07.00.05
2. Customized Software for generation of terminal list and other reports as per NPCIL requirements.
3. Development of Cable schedule database in Smart Plant Electrical 3.5

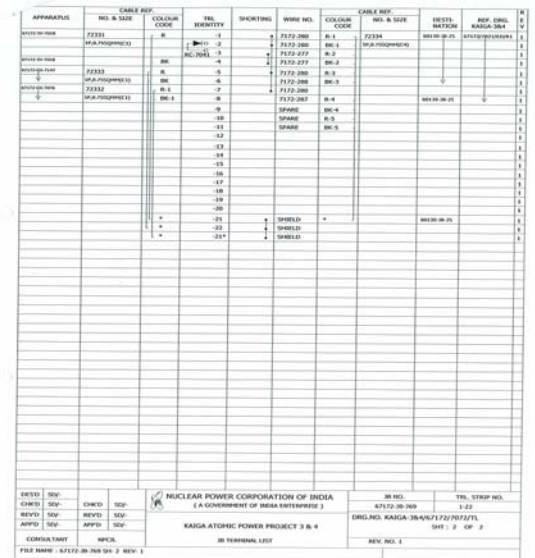
While SmartPlant Instrumentation is the tool for populating intelligent terminal list data, Customized software in visual basic is used to extract terminal list and various reports as per NPCIL format. SmartPlant Electrical is used for creation of Cable schedule database and customization of Report of Cable Schedule and Associate Schedule as per the Client's format.

Solution Architecture

The integrated solution has been divided in to the following distinct Phases.

1. Study of input drawings.
2. Marking up of drawings for engineering changes with the help of NPCIL engineers
1. Populating or creating wiring information in SPI.

2. Modification of wire route as per changes in AutoCAD having database attached to it
3. Modification of affected TLs due to markup changes.
4. Extraction of reports in NPCIL format using externally developed software.



The Project

Rolta has offered its services for Computer Aided Design of Terminal List, Automated Wire route information and preparation of Cable schedule for their KAIGA-3, 4 & RAPP-5, 6 using SPI and SPEL.

Following is the scope of work.

1. Preparation of Terminal List (20000 sheets)
2. Automated Wire route information on logic ED/WD (3000 Sheets).
3. Creation of data base for thousands of tags, wiring interconnections, cable routing and penetration pockets in Reactor Building floor & wall openings
4. Routing of 1,40,000 cables and preparation of associated schedules done in Smart Plant Electrical 3.5
5. Customization of Report of Cable Schedule and Associate Schedule as per the Client's format.
6. Preparation of Cableway segment (1 segment =1 mtr.cable tray) for all laid cable trays in plant. Preparation associate report for Floor opening, Wall opening, Sleeve, Cable tray loading, Cable summary
7. Supply of required Hardware and Software's, installation at their respective plant site and maintenance.

