

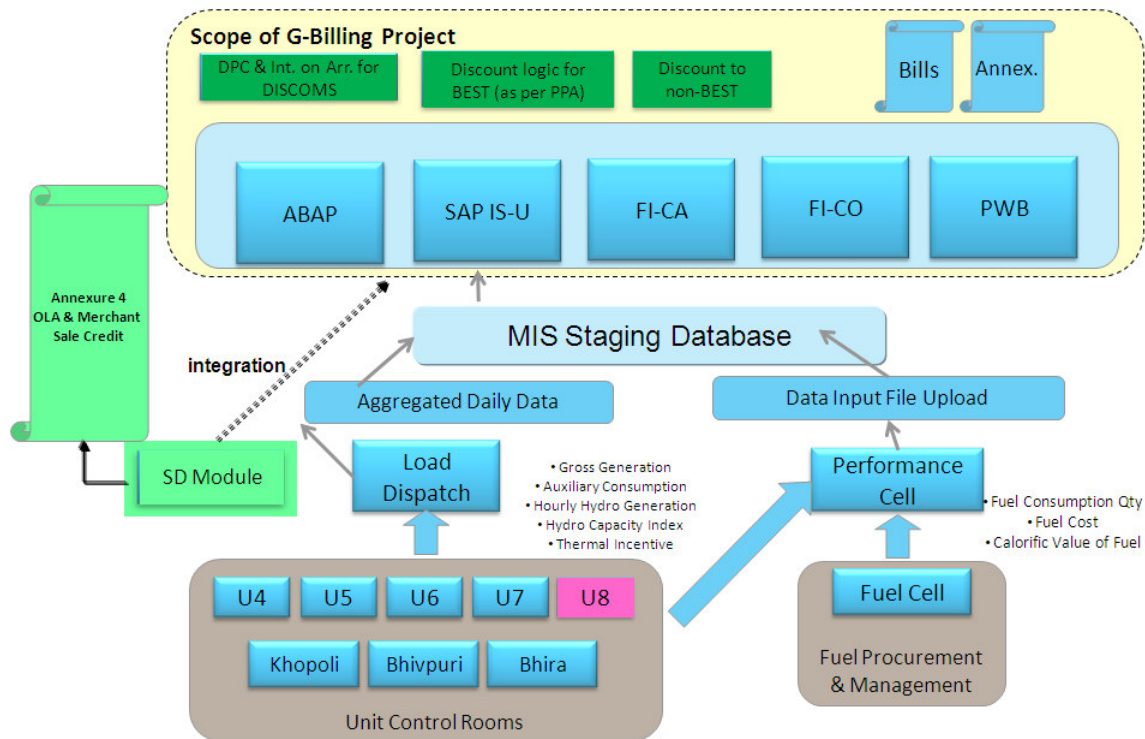
# Information Technology – Integration

## SAP ISU (Industry Specific – Utility) based Generation Billing implemented in Tata Power

### ABSTRACT

Tata Power Generation Business comprises of Hydro as well as Thermal power. Thermal power generating unit is capable of firing on multiple fuels viz; coal, oil mix-gas etc., each involving separate calorific value and different calculation methodology. Business of Power sale in India from Generating companies to Distribution licensees is regulated. The billing of Generation Business customers involves a complex process with number of variables adding to the complexities in the business logic based on the Tariff Regulations of the Maharashtra State Electricity Regulator.

- Unique mix of thermal & hydro capacities with each needs separate formulation.
- Requirement of submitting main & supplementary bill on 1<sup>st</sup> & 3<sup>rd</sup> working days for power sold with rate based on Tariff Order and with differential rate based on Fuel adjustment Charges.
- Integration of Power sale based on PPA (Power Purchase Agreement), there is a need for giving credit for the difference between the selling price and the variable tariff approved by Regulator.
- Complex accounting methodologies of DPC (Delayed payment charges) & cash discount, involving different treatment for different customers.



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The standard SAP ISU does not allow multiple bills to a single customer for the same billing period in a month. But Generation billing requires multiple supplementary bills. Hence we

developed an innovative solution using standard SAP ISU for billing & invoicing. It is a seamless integration with all Business processes like Plant generation data from Load Dispatch, Power sale from SAP SD module. The solution landscape is shown in the above diagram.

Solution : Maximum number of bills to be generated for a particular customer is fixed & accordingly the same number of contract accounts is created in SAP ISU. Contract number remains the same & there will not be any joint invoicing. Generation data along with fuel mix & auxiliary consumption is entered at respective process points (Later on automatic data capture from PI server on real time basis) and data is integrated with Generation billing. The entire solution is built in SAP.

Mr Ujjal Kumar Ghatak, Chief Information Officer of Tata Power, who is also a post graduate in Electrical Engineering from India Institute of Technology, Kharagpur (India), is the author of this innovative solution.