Power Sector Report Volume 4: GTD - Generation and T&D - Infrastructure

Description:
The power sector is composed of the entities which generate, transport and distribute electricity to consumers. The power sector consists of the electrical utility industry, other utilities, industry and commerce which generate and consume electricity, and includes private generators. The power sector is colossal, the global infrastructure is enormous and the financial resources required correspondingly large.

The electrical utilities, merchant generators or independent power producers (IPPs), are the primary tier of the power sector, for they are the only participants whose sole business is the provision of power. In almost every country, whatever the utility structure, state-controlled, mixed or wholly liberalised, there are independent power producers, IPPs, generating power for sale to the grid or specific customers. These differ from captive power producers or auto-producers, which generate for their own needs and sell the surplus. The second tier consists of non-electrical utilities and industrial captive power producers (CPPs).

The electrical utilities overwhelmingly dominate the overall power sector, with 91% of generation, 93% of transmission and 87% of distribution. Captive industrial generators which are recorded account for 5% to 7% of the three segments of GTD, and hidden generators for a further unknown amount.

41% of final electricity consumption is by industry, 23% by commerce and 28% is residential and the balance by public services and railways.

Then there are the industrial and commercial consumers of electricity, who do not generate their own power. The non-generating customers own equipment from the point of connection, principally a substation/transformer and a custodial meter to operate and measure the transfer of power from generator to customer. As operators of this equipment, these customers are participants in the power sector.

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