



Power is an essential requirement for all facets of our life. Without power, we feel helpless as our lifestyle demands the usage of electricity in our day-to-day activities. It is the critical infrastructure on which the socio-economic development of the country depends.

Today, the growth of power demand in India is enormous and is further growing steadily. As per the latest data as on 31-05-2009, all India installed generating capacity of utilities is 1,49,391.91 MW; comprising of 95,151.74 MW thermal based capacity, 36,877.76 MW hydro based capacity, 4,120 MW nuclear based capacity and 13,242.41 MW from renewable energy sources.

Looking at the energy demand and supply side, India is still facing severe shortages. The country has peak power and average energy shortages of 12% and 8% respectively. The per capita consumption is targeted to grow about 1000 kWh per year by 2012, thus imposing extra demand on power. In context to this, there will be demand for various power equipment including cables.

Cable is a vital part of any electrical system and play a crucial part in all the three aspects of the power sector - generation, transmission and distribution. In simpler word, a cable is an assembly of one or more electrical conductor, usually held together with an overall sheath of insulating material. Cables manufactured can be broadly categorized as Power Cable - (HT & LT power cables), Control Cables and Telecommunication Cables.

Power Cables

Major users of power cables are broadly classified into:

- Power sector - central, state and private electricity utilities and
- major industries like : petrochemicals, mining, steel/metallurgical, ship building, engineering, cement, railway, defence etc.

There are few manufacturers who currently manufacture cables upto 220kV grade whereas a larger number of manufacturers manufacture medium voltage cables upto 33kV, besides LV cables. Considering the strong domestic demand for cables in the power sector, overseas cable manufacturing giants have entered into market through joint ventures with Indian cable manufacturers; for manufacturing EHV cables and special types of cables.

The increase has been observed in demand for XLPE cables where as the demand for PILC cables is almost negligible. In year 2008-2009, the production of LV - PVC & XLPE cables was about 2,15,000 kms whereas for HV & EHV - PVC & XLPE power cables (3.3 KV & above) , the production was about 21,580 kms. The industry size for power cables is about Rs. 8,350 crore.

Control Cables

Control cables comprise of control, instrumentation, panel, automobile wiring etc. Majority of these cables are manufactured in small sectors as capital required is low. The growth in control cables is not significant. The value of control cable market was about Rs. 2100 crore. This excludes building wires and cables.

The building wiring cables segment comprises residential, commercial, hotels, shops and offices. The residential segment contributes a major portion of the demand, followed by shops and offices. The size of building wires and cables is estimated as Rs. 5000 crore.

Telecommunication Cables

The Indian telecom market, led by the robust growth in mobile subscriber base, is one of the fastest growing in the world. Opportunities are also available for many new market entrants and applications (like broadband services, Internet protocol virtual private network (IPVPN), wireless communications and security technologies). This in turn, has created demand for telecommunication cables. Telecommunication cables include mainly:

- Jelly filled Cables
- Optical Fibre Cables
- Aerial Cables

Demand for Jelly Filled Telephone Cables (JFTC) is stagnant due to change in technology and increased use of optical fibre cables. But it will not die till fibre-to-home becomes reality. There are customers like MTNL, BSNL, Bharati telecom etc. who still use these cables. Apart from this, aerial cables, data cables are also used. Keeping in view the lowered demand for jelly-filled cables, some of the leading players have forayed into optical fibre cables.

Fibre-to-the-premises (FTTP), fibre-to-the-home (FTTH) and fibre-to-the-building (FTTB) applications are behind the development of the fiber-optic cabling industry worldwide. A compound annual growth rate of 10 percent through 2010 is being forecasted for the worldwide fibre-optic cable industry. India has emerged as the world's fifth largest consumer of optical fibre cables in the world, behind the US, China, Japan and Korea.

Optical fibre cables offer important advantages for power systems: cheap, light weight and immune from the effects of electromagnetic interference. With these features, high bandwidth secure communications along power transmission systems is an attractive option.

In the year 2008-09, the Indian market size for optical fibre cables is about 14 million fkm (fibre kilometer).

The Industry - today

Prior to slowdown in industry, cables manufacturers witnessed heavy demand across all the key sectors: power, telecom, railways and various industrial, construction, engineering and manufacturing industries. They invested heavily into augmentation of capacities and technology up-gradation taking

into accounts the need for cables arising out of Government objective "Power for All". With this, the industry has tried to be in line with the latest technologies to keep pace with the rapidly changing market condition and maintain standards to meet the international requirements. But recent slowdown in the overall economy has not spared the cable industry as well. The cable industry is also facing the fall in demand.

India's overall electrical and electronics industry shows lower growth of 2.75 per cent this year (in volume terms), whereas the growth was 15% during the previous financial year (2007-08). According the data compiled by IEEMA, the overall growth for cable industry is mere 4.5% during the financial year 2008-09 as against the growth of 16% during the previous fiscal where the size of cable industry was Rs. 12,100 crores. The production of LV & HV power cables shows approx. 14% growth and declining trend is observed for control cables indicating 27% fall in production. whereas there is huge demand for EHV cables due to urbanization.

Reduction in growth is mainly due to liquidity crunch and reduced demand for equipment due to delay in implementation of both ongoing and new projects in the pipeline. It has been observed that import for HV power cables in the last fiscal was on high rise (above 200%) to tune of Rs. 753 crores. Major import countries are Thailand, China, USA, and Korea and some import is from European countries like Germany, Switzerland and France. Indian manufacturers, who have augmented their capacity for EHV cables, are running their plants under-utilised. However, exports of LV and HV cables have also increased more than 50% in value term. Indian Cable manufacturers are exporting the LV & HV cables to Middle East, Far East, South African countries, and South American countries.

Issues faced by the industry

Apart from the sufficient capacity and capabilities of the industry, the Indian Cable manufacturers are facing various problems while exporting their products to other countries. It is mandatory for the Indian Manufacturers to have the cable type tested from the respective national approved laboratory. Indian Govt. Undertaking and Power Utilities should also incorporate type test approval certificate of Indian National Laboratory such as CPRI for foreign bidders to qualify to bid.

As mentioned above, there is lot of demand for EHV cables and the same is expected to grow exponentially due to fast changing life in metros, surrounding cities and overall urbanization. Accordingly, tenders are being floated for EHV cables but they stipulate extra-

ordinary criteria like 5 years of experience etc. Many manufacturers have set-up new technology to cater the demand. The unreasonable criteria are restricting qualified and technically competent Indian companies from gaining the acceptance. The industry is not being given a chance to prove itself over foreign cable companies.

For the payments, foreign suppliers are favoured with letter of credit whereas Indian Cable industry faces unfavourable terms of payments from the local users and SEBs.

Initiatives by IEEMA

The industry is always keen to provide the latest updates in technology, installation maintenance and to share the knowledge and experiences with users and at the same time, feedback collection for better services.

The cable industry has been interacting with distribution companies in the training programmes organized under "Distribution Reform, Upgradation & Management (DRUM)" project supported by USAID. Till date, IEEMA has conducted such programmes

for various distribution products including cables for North Delhi Power Ltd., New Delhi, Reliance Energy Ltd., Mumbai, Tamil Nadu Electricity Board., Madurai, Uttar Harayana Bijlee Vitaran Nigam, Karnal, Torrent Power Ltd., Surat, Lower / Upper Aasam DISCOMs, JVVNL , Ajmer Vidyut Vitran Nigam Ltd. and Jodhpur Vidyut Vitran Nigam Ltd, UPPCL, Lucknow.

Today, Indian Cable manufacturers are contributing to the Indian economy by supplying world-class cables for the power, industrial, telecom and housing sectors. The Indian Cable Industry has more than the requisite capabilities to cater to the domestic demand as well as demand for cables emerging from other countries. The industry is making all efforts to deliver quality products to its Users. At the same time, it expects the co-operation from its users when it comes to payment and realistic terms for delivery.



Swapna Naik
IEEMA, Mumbai