
Description: Comprehensive quantitative data and qualitative analysis about the towers, poles and street lighting markets, with market commentary and competitive analysis.

- Base year 2015 and forecasts of the installed base and demand from 2016 to 2020.
- Global analysis, the world, regions and for 124 countries.

The 4th edition has three major new features for this $36 billion market:

- The March of the Monopoles - long established in the US, EHV monopoles are breaking into new markets with innovative new designs, replacing lattice towers.
- Street lighting is included for the first time, a vigorous market driven by the conversion to high efficiency LEDs, a growing market for steel, concrete and composite poles.
- The composite poles industry, market development and production technology are analysed, with profiles of the main producers.

TRANSMISSION LATTICE TOWERS AND MONOPOLES

1. Lattice Transmission Towers and Monopoles
   - Installed base in units - Steel, concrete, wood
   - Annual sales in units
   - Annual sales in $ value

2. Long term demand cycle
   The long term demand cycle charted for new additions and replacements over the long term since 1900.

3. Monopoles and Lattice Towers
   Long established in the United States for EHV lines, monopoles are used in China and are now breaking into the conservative markets of Europe with interesting new designs. This trend is driven by pressure on rights-of-way, visual criticism of lattice towers and public fears of EMF dangers to children.

4. Tower and Monopole vendors, production capacity and market shares
   The top 34 manufacturers are listed with shares of production and the leaders profiled.

5. Evolution of the Transmission Networks
   Length and voltage time series.

6. Types of Lattice Tower
   Lattice towers are designed for different functions and stresses and there is wide variation in cost.
   - Suspension towers
   - Tension towers
   - Angle suspension towers
   - Dead end towers

7. Service life and maintenance of Towers and Monopoles
   Maintenance practices have a critical impact on the service life of towers, especially in harsh climate conditions.

8. The value chain - from materials to capex
   The value chain is a continuous process of adding cost to a product and depending where you position it the value changes, the end user’s capex being some five times the cost of original materials. The value chain is analysed with different mark-ups for each of six stages.

UTILITY POLES - WOOD, CONCRETE, STEEL, COMPOSITE

9. Utility Poles - Electricity, Telegraph, Street Lights
   - Installed base in units - steel, concrete, wood, composite
10. Utility Poles service life and replacement
Demand depends on new build and replacement. In 1950, 4.3% of demand for utility poles was for replacement, in 2015 that has risen to 62%. Poles have widely varying service lives depending on material and conditions. The service lives have been established by region and in some cases for individual countries.

11. Joint use of Utility Poles
Joint use by different utilities is a significant factor in the pole market. The protocols for space allocation and standards are outlined.

12. National market commentary for Utility Poles
Market commentary on installed bases and demand for utility poles in 24 countries, with information on numbers and type of pole.

13. Types and materials for of Utility Poles and applications
There are many types of pole in use. Different types and applications are outlined.

14. Composite Poles and materials
Composites are analysed in a 23 page section discussing this technology, applications, advantages and disadvantages, market status and manufacturers.

15. Circuits, phases and conductors
Most distribution networks employ single circuits, whereas transmission networks range from single to multiple circuits. This is an important consideration in specifying the type and dimensions of towers and poles.

16. ROW - Rights of Way
Rights of Way (ROW) is a significant cost and can be a serious obstacle in designing networks and specifying equipment. It is a significant factor in the trend to Monopoles.

17. Utility Pole and Street Light vendors
- Companies manufacturing concrete and steel poles are listed with brief details.
- Companies harvesting and preparing wood poles are listed with brief details.

18. Dangers & mitigation of damage to Poles by birds.
Birds constitute a significant threat to poles and energised lines. Accidents not only harm the birds but causes power outages. The problems and mitigations are discussed.

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