

NRG Expert Electricity Intelligence The Global Market for Cables, Insulators, & Towers, Report and Database Edition 2, 2013-2017

Market Intelligence

T&D networks are continuously evolving in both size and nature as they grow in order to cope with ever-rising demand. The cables, towers and insulators sector is seeing a variety of different development paradigms as grids expand worldwide. While developing countries have primarily seen point-to-point radial distribution instead of intermeshed networks, many developing countries have pursued a policy of putting all urban distribution underground. Policy variations like these have knock-on effects on other types of equipment.

This NRG Expert report and database allows you to make key business decisions based on our forecasts and analysis of the Electricity T&D Market. Our teams of analysts, backed by the vast data we have collected, have created this industry analysis and forecasted data to 2017.

The Database

The database is the main focus of the product and as such contains the important forecast information and current figures. The database consists of 9 individual **Region** Microsoft® Excel (.xlsx) files.

Global Data Summary

The **Global Data Summary** file contains two tabs:

- Annual Demand
- Capex

The *Annual Demand* tab shows a regional and by-country overview of the annual demand 2012 actual figures and forecasts for 2013-2017 in 2012 United States Dollars (USD) as broken down into the 3 sectors defined by NRG Expert: Cables, Insulators and Towers.

The *Capex* tab follows a similar format as the Annual Demand tab and shows Capital Expenditure in the Cables, Towers and Insulator sectors by country presenting 2012 actual and 2013-2017 forecast figures in 2012 USD. Also included is the 2012 total T&D Capex figure incorporating all sectors of the T&D Market as defined by NRG Expert.

Region Files

Each region file contains a breakdown of the *Annual Demand* and *Capex* figures of countries of that region followed by individual tabs for each country in the region.

Country Profiles

NRG Expert has compiled data in the T&D Sector for **180 countries** broken down into 9 regions. The country profiles contain:

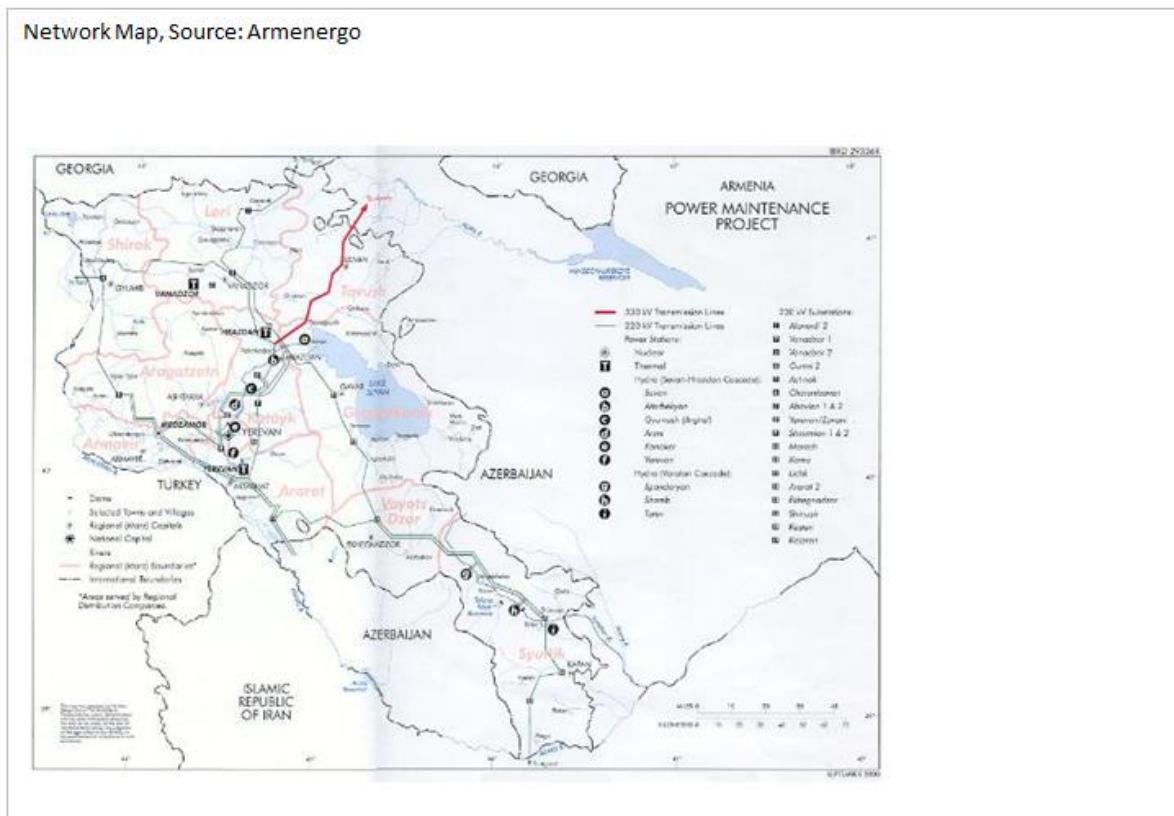
- Transmission¹ and Distribution line-length (installed KMs) data:

Transmission Installed Base (km)	2011*	2012	2013	2014	2015	2016
	5,090.74	5,183.12	5,277.18	5,411.03	5,517.02	5,627.69
Distribution Installed Base (km)	2011*	2012	2013	2014	2015	2016
	34,091.54	34,432.46	34,776.78	35,122.19	35,470.56	35,825.58
Line Extension (km)	2011*	2012	2013	2014	2015	2016
Transmission	90.74	92.38	94.06	133.85	105.98	110.68
Distribution	337.54	340.92	344.32	345.41	348.37	355.02

- Annual Demand (2012 actuals forecast to 2017 in 2012 USD) data:
- Voltage Breakdown and Overhead Underground Analysis²

Trunk transmission				All Transmission			Distribution		Reticulation			
Transmission												
330 kV >	200-275 kV	110-161 kV	Sub-Trans 45-90 kV	OH line	UG cable	Subsea	MV OH	MV UG	LV OH	LV UG	Transmission	Distribution
4%	28%	68%	0%	100%	0%	0%	38%	15%	41%	7%	12%	88%

- Network Maps²



¹ Where applicable

² Not available for All Countries. Please refer to the NRG Expert T&D Database Guide for complete listing

- Listings of Grid Interconnections2

Country	Connection Type	Operational state
Azerbaijan	Line HVL-330 kV (100 km)	Out of Service
	Line HVL-220 kV (63)	Out of Service
	Line HVL-110 kV (98 km)	Out of Service
	Line HVL-110 kV (30 km)	Out of Service
Georgia	One line HVL-220 kV (65 km)	Operational
	One line HVL-110 kV (35)	Operational
	One line HVL-110 kV (19 km)	Operational
Turkey	One line HVL-220 kV (65 km)	Out of Service
Iran	One line HVL-220 kV (78)	Operational
	One line HVL-220 kV	Operational

Countries Covered in the Database

Country	Trans. Inst. Base	Dist. Inst. Base	Capex	Annual Demand	OV/UG/V	Network Map	Grid Interconnections
Afghanistan	0	0	0	0	0	0	
Albania	0	0	0	0	0	0	
Algeria	0	0	0	0			0
Angola	0	0	0	0			
Argentina	0	0	0	0	0		
Armenia	0	0	0	0	0	0	0
Australia	0	0	0	0	0		
Austria	0	0	0	0	0	0	0
Azerbaijan	0	0	0	0	0	0	0
Bahamas	0	0	0	0			
Bahrain	0	0	0	0	0		
Bangladesh	0	0	0	0	0	0	
Barbados	0	0	0	0			
Belarus	0	0	0	0	0	0	0
Belgium	0	0	0	0	0	0	0
Belize	0	0	0	0			
Benin	0	0	0	0			
Bermuda	0	0	0	0	0		
Bhutan	0	0	0	0	0	0	
Bolivia	0	0	0	0			
Bosnia & Herzegovina	0	0	0	0	0	0	
Botswana	0	0	0	0			
Brazil	0	0	0	0	0		
Brunei	0	0	0	0		0	
Bulgaria	0	0	0	0	0	0	0
Burkina Faso	0	0	0	0			
Burundi	0	0	0	0			
Cambodia	0	0	0	0	0	0	
Cameroon	0	0	0	0			

Country	Trans. Inst. Base	Dist. Inst. Base	Capex	Annual Demand	OV/UG/V	Network Map	Grid Interconnections
Canada	o	o	o	o	o		
Central African Republic	o	o	o	o			
Chad	o	o	o	o			
Chile	o	o	o	o			
China	o	o	o	o	o		
Colombia	o	o	o	o			
Congo	o	o	o	o			
Congo DR	o	o	o	o			
Costa Rica	o	o	o	o			
Côte d'Ivoire	o	o	o	o			
Croatia	o	o	o	o	o	o	o
Cuba	o	o	o	o			
Cyprus	o	o	o	o	o	o	o
Czech Republic	o	o	o	o	o	o	o
Denmark	o	o	o	o	o	o	o
Djibouti	o	o	o	o	o	o	o
Dominican Republic	o	o	o	o			
Ecuador	o	o	o	o			
Egypt	o	o	o	o			
El Salvador	o	o	o	o			
Equatorial Guinea		o	o	o			
Estonia	o	o	o	o	o	o	o
Ethiopia	o	o	o	o			o
Fiji	o	o	o	o			
Finland	o	o	o	o	o	o	o
France	o	o	o	o	o	o	o
French Guyana	o	o	o	o			
Gabon	o	o	o	o			
Gambia	o	o	o	o			
Georgia	o	o	o	o	o	o	
Germany	o	o	o	o	o	o	o
Ghana	o	o	o	o			

Country	Trans. Inst. Base	Dist. Inst. Base	Capex	Annual Demand	OV/UG/V	Network Map	Grid Interconnections
Greece	o	o	o	o	o	o	o
Guadeloupe	o	o	o	o			
Guatemala	o	o	o	o			
Guinea	o	o	o	o			
Guinea Bissau		o	o	o			
Guyana	o	o	o	o			
Haiti	o	o	o	o			
Honduras	o	o	o	o			
Hong Kong	o	o	o	o			
Hungary	o	o	o	o	o	o	o
Iceland	o	o	o	o	o	o	
India	o	o	o	o	o	o	
Indonesia	o	o	o	o		o	
Iran	o	o	o	o	o	o	
Iraq	o	o	o	o			
Ireland	o	o	o	o	o	o	
Israel	o	o	o	o	o		
Italy	o	o	o	o	o	o	o
Jamaica	o	o	o	o			
Japan	o	o	o	o	o	o	
Jordan	o	o	o	o	o		
Kazakhstan	o	o	o	o	o	o	
Kenya	o	o	o	o			
Korea - North	o	o	o	o		o	
Korea - South	o	o	o	o	o	o	
Kuwait	o	o	o	o	o		
Kyrgyzstan	o	o	o	o	o	o	
Laos	o	o	o	o	o		
Latvia	o	o	o	o	o	o	o
Lebanon	o	o	o	o			
Lesotho	o	o	o	o			

Country	Trans. Inst. Base	Dist. Inst. Base	Capex	Annual Demand	OV/UG/V	Network Map	Grid Interconnections
Liberia	o	o	o	o			
Libya	o	o	o	o			o
Lithuania	o	o	o	o	o	o	o
Luxembourg	o	o	o	o	o		
Macau	o	o	o	o	o		
Macedonia	o	o	o	o	o	o	o
Madagascar	o	o	o	o			
Malawi	o	o	o	o			
Malaysia	o	o	o	o	o		
Maldives		o	o	o			
Mali	o	o	o	o			
Malta	o	o	o	o	o	o	
Mauritania	o	o	o	o			
Mauritius	o	o	o	o			
Mexico	o	o	o	o	o		
Moldova	o	o	o	o	o	o	
Mongolia	o	o	o	o			
Morocco	o	o	o	o			o
Mozambique	o	o	o	o			
Myanmar	o	o	o	o			
Namibia	o	o	o	o			
Nepal	o	o	o	o		o	
Netherlands	o	o	o	o	o	o	o
Netherlands Antilles	o	o	o	o			
New Caledonia	o	o	o	o			
New Zealand	o	o	o	o	o		
Nicaragua	o	o	o	o			
Niger	o	o	o	o			
Nigeria	o	o	o	o	o		
Norway	o	o	o	o	o		
Oman	o	o	o	o	o	o	
Pakistan	o	o	o	o	o	o	

Country	Trans. Inst. Base	Dist. Inst. Base	Capex	Annual Demand	OV/UG/V	Network Map	Grid Interconnections
Panama	o	o	o	o			
Papua New Guinea	o	o	o	o			
Paraguay	o	o	o	o			
Peru	o	o	o	o			
Philippines	o	o	o	o		o	
Poland	o	o	o	o	o	o	o
Portugal	o	o	o	o	o	o	o
Puerto Rico	o	o	o	o			
Qatar	o	o	o	o	o		
Romania	o	o	o	o	o	o	o
Russia	o	o	o	o	o	o	o
Rwanda	o	o	o	o			
Sao Tome & Principe	o	o	o	o			
Saudi Arabia	o	o	o	o	o	o	
Senegal	o	o	o	o			
Serbia & Montenegro	o	o	o	o	o	o	o
Seychelles	o	o	o	o			
Sierra Leone	o	o	o	o			
Singapore	o	o	o	o	o		
Slovakia	o	o	o	o	o	o	o
Slovenia	o	o	o	o	o	o	o
Solomon Islands	o	o	o	o			
Somalia	o	o	o	o			
South Africa	o	o	o	o	o		
Spain	o	o	o	o	o	o	o
Sri Lanka	o	o	o	o	o		
St. Lucia	o	o	o	o			
Sudan	o	o	o	o			
Suriname	o	o	o	o			
Swaziland	o	o	o	o			
Sweden	o	o	o	o	o		
Switzerland	o	o	o	o	o	o	

Country	Trans. Inst. Base	Dist. Inst. Base	Capex	Annual Demand	OV/UG/V	Network Map	Grid Interconnections
Syria	o	o	o	o	o		o
Taiwan	o	o	o	o	o	o	
Tajikistan	o	o	o	o	o		
Tanzania	o	o	o	o			
Thailand	o	o	o	o	o	o	
Togo	o	o	o	o			
Tonga	o	o					
Trinidad & Tobago	o	o	o	o			
Tunisia	o	o	o	o			o
Turkey	o	o	o	o	o	o	o
Turkmenistan	o	o	o	o	o		
Uganda	o	o	o	o			
Ukraine	o	o	o	o	o		o
United Arab Emirates	o	o	o	o	o		
United Kingdom	o	o	o	o	o	o	o
United States of America	o	o	o	o	o		
Uruguay	o	o	o	o			
Uzbekistan	o	o	o	o	o		o
Venezuela	o	o	o	o			
Vietnam	o	o	o	o	o		
Western Samoa	o	o	o	o			
Yemen	o	o	o	o			
Zambia	o	o	o	o			
Zimbabwe	o	o	o	o			

The Report

The Global Market for Cables, Insulators and Towers Report consists of several sections that provide additional insight into this market and illustrates the meaning and implications of the information in the database. A detailed historical overview discusses the origins of the electrical supply industry, which provides the basis for a discussion of today's market factors and the future of the Cables, Insulators and Towers sector. Our definition of the infrastructure sector is also included, along with illustrations of our annual demand data (forecasted to 2017), charts illustrating country data, intelligence on Cables, Insulators and Towers companies and a description of our methodology.

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