

ELECTRICAL SAFETY LEGISLATION UPDATES

“Toward Better Safety Management Practices”

by

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Director

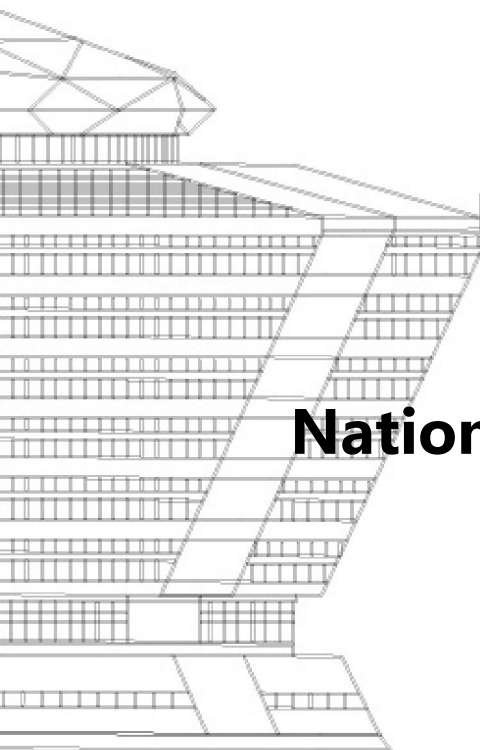
Department of Electrical Safety Regulations
Energy Commission

National Conference on Electrical Safety, 2015

Putra World Trade Centre, Kuala Lumpur

9 November 2015

organised by Energy Commission



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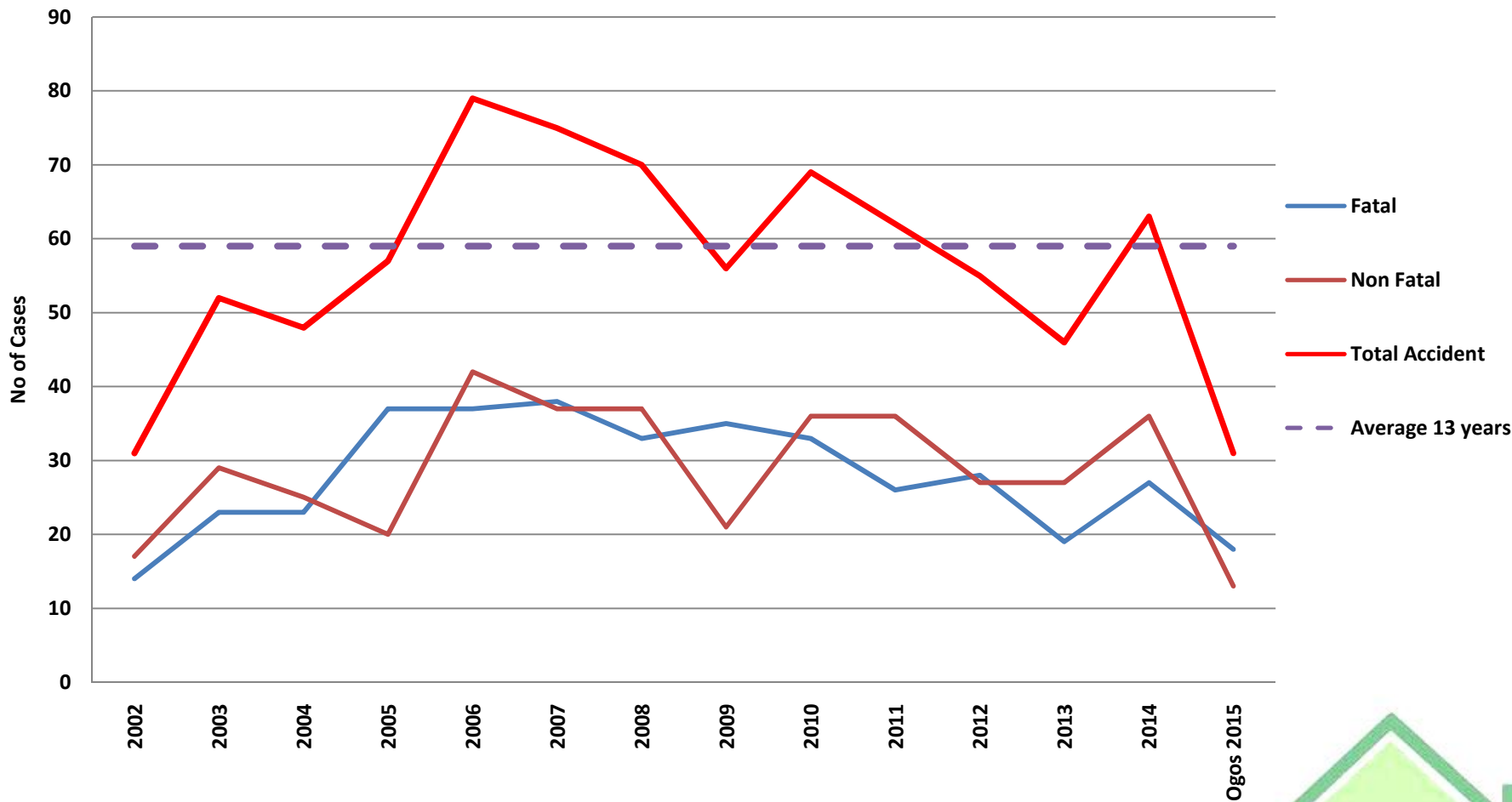
- Updates on Statistics of Electrical Accidents
- Updates on Electricity Supply (Amendment) 2015 –Safety Aspect



Updates on Statistics of Electrical Accident

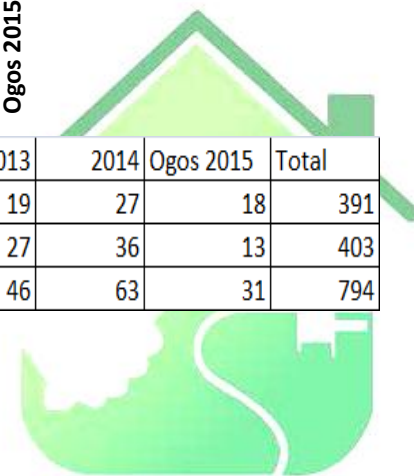


Statistics of Number of Electrical Accidents Cases Reported

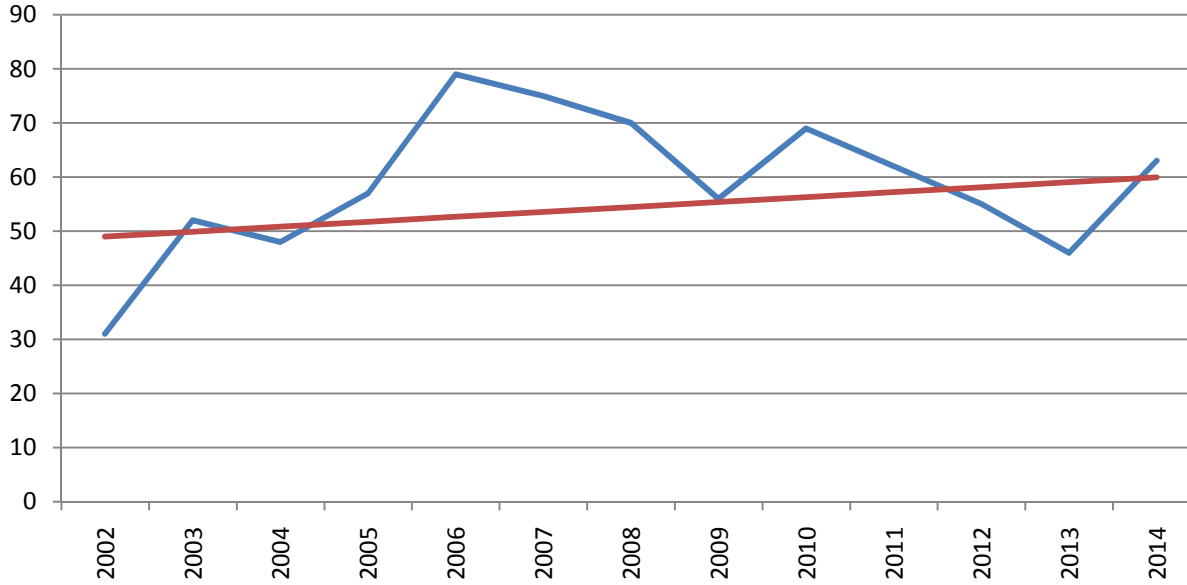


	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Ogos 2015	Total
Fatal	14	23	23	37	37	38	33	35	33	26	28	19	27	18	391
Non Fatal	17	29	25	20	42	37	37	21	36	36	27	27	36	13	403
Total Accident	31	52	48	57	79	75	70	56	69	62	55	46	63	31	794

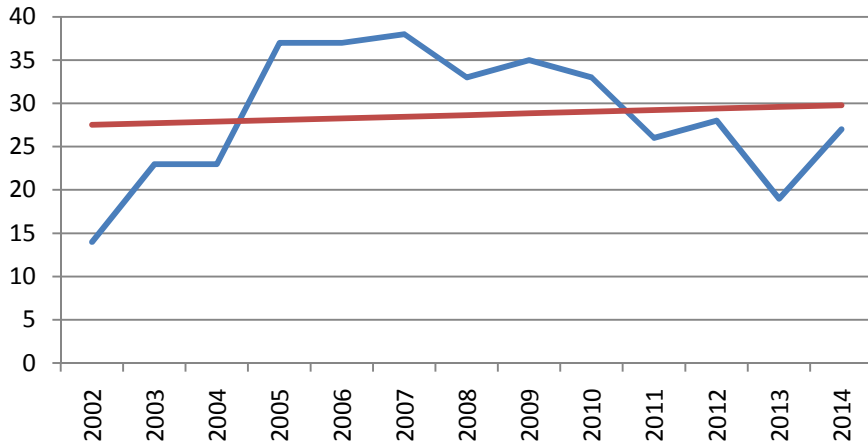
Note : Average number of electrical accident for the past 13 years is 59



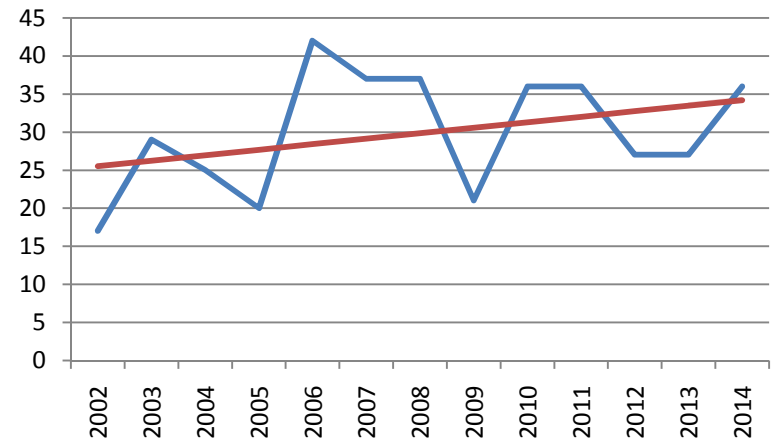
Trending of Electrical Accidents Report (2002-2014)



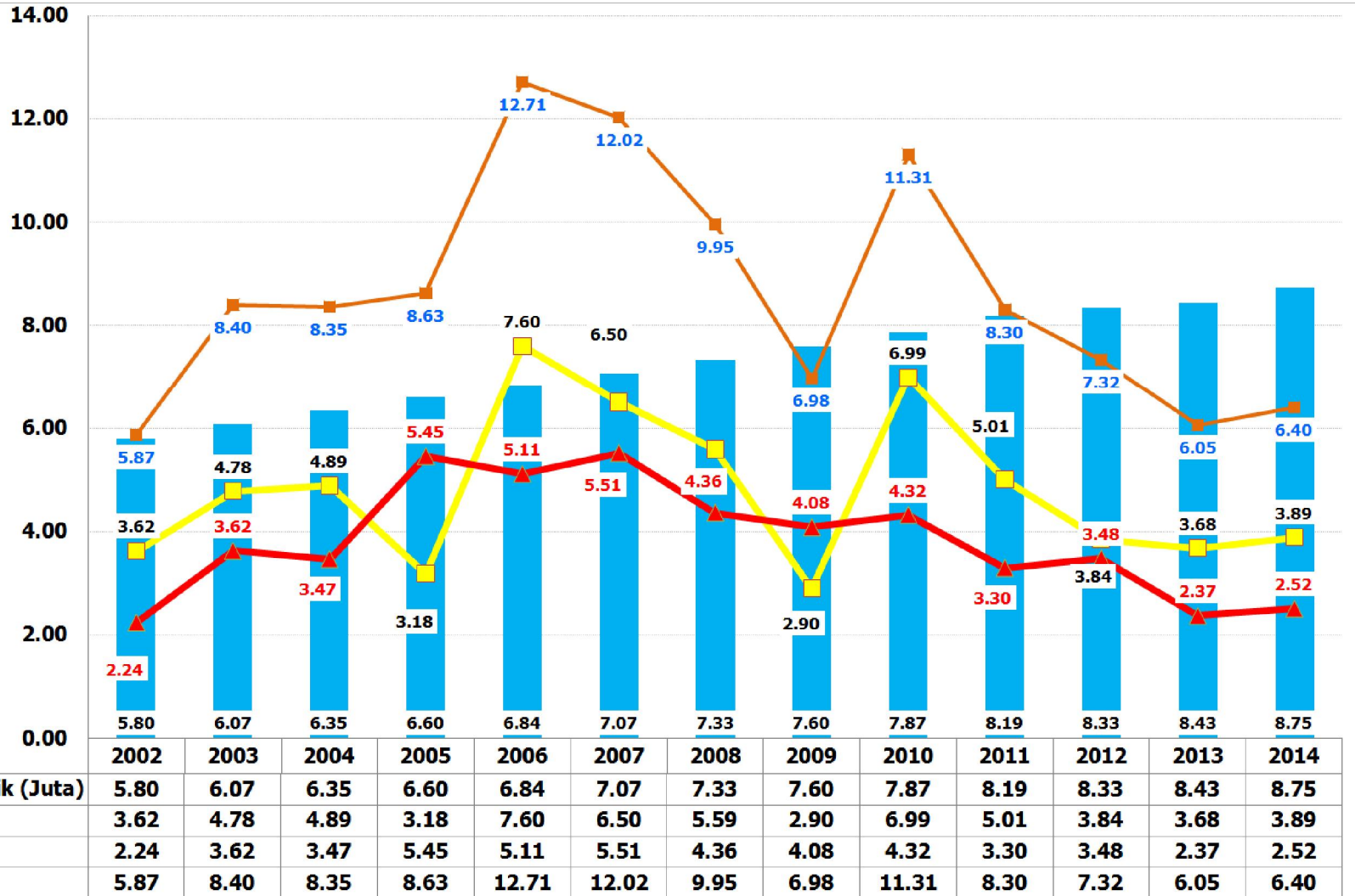
Trending of Fatal Electrical Accidents Reported (2002-2014)



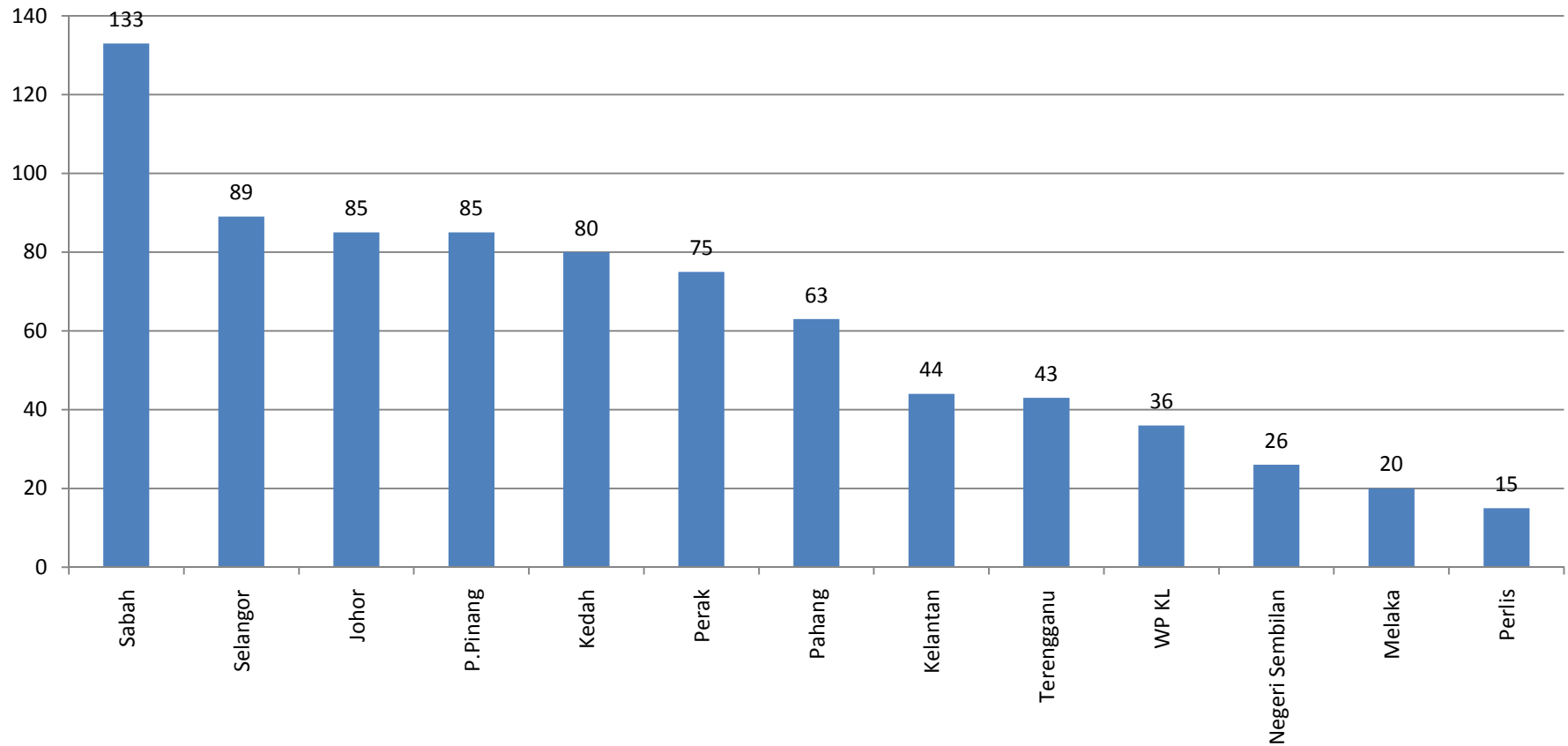
Trending of Non Fatal Electrical Accidents Reported (2002-2014)



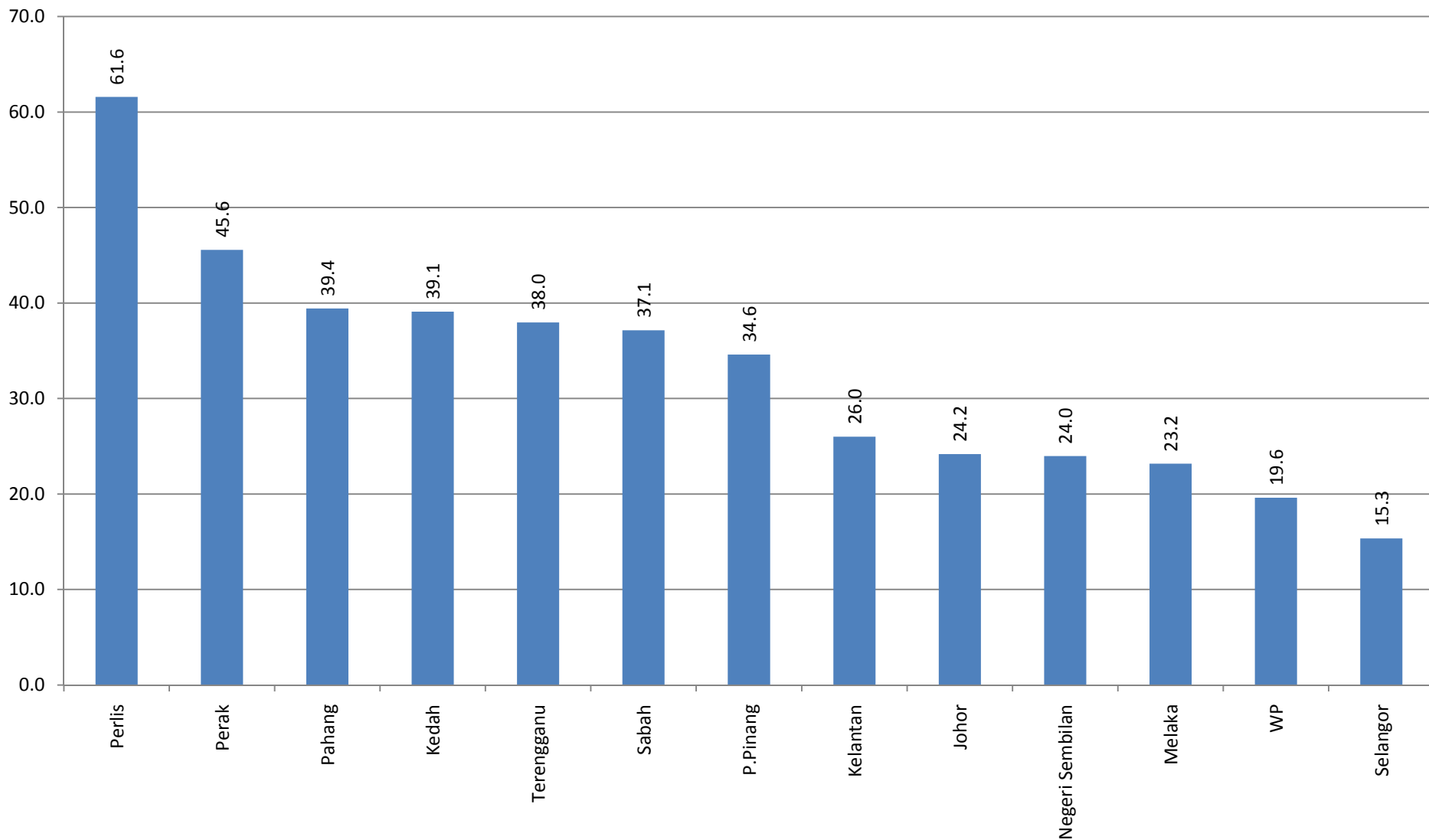
Rate of Casualty in Electrical Accidents Per Million Electricity Consumer(2002-2014)



Number of Electrical Accidents According to States (2002 –August 2015)

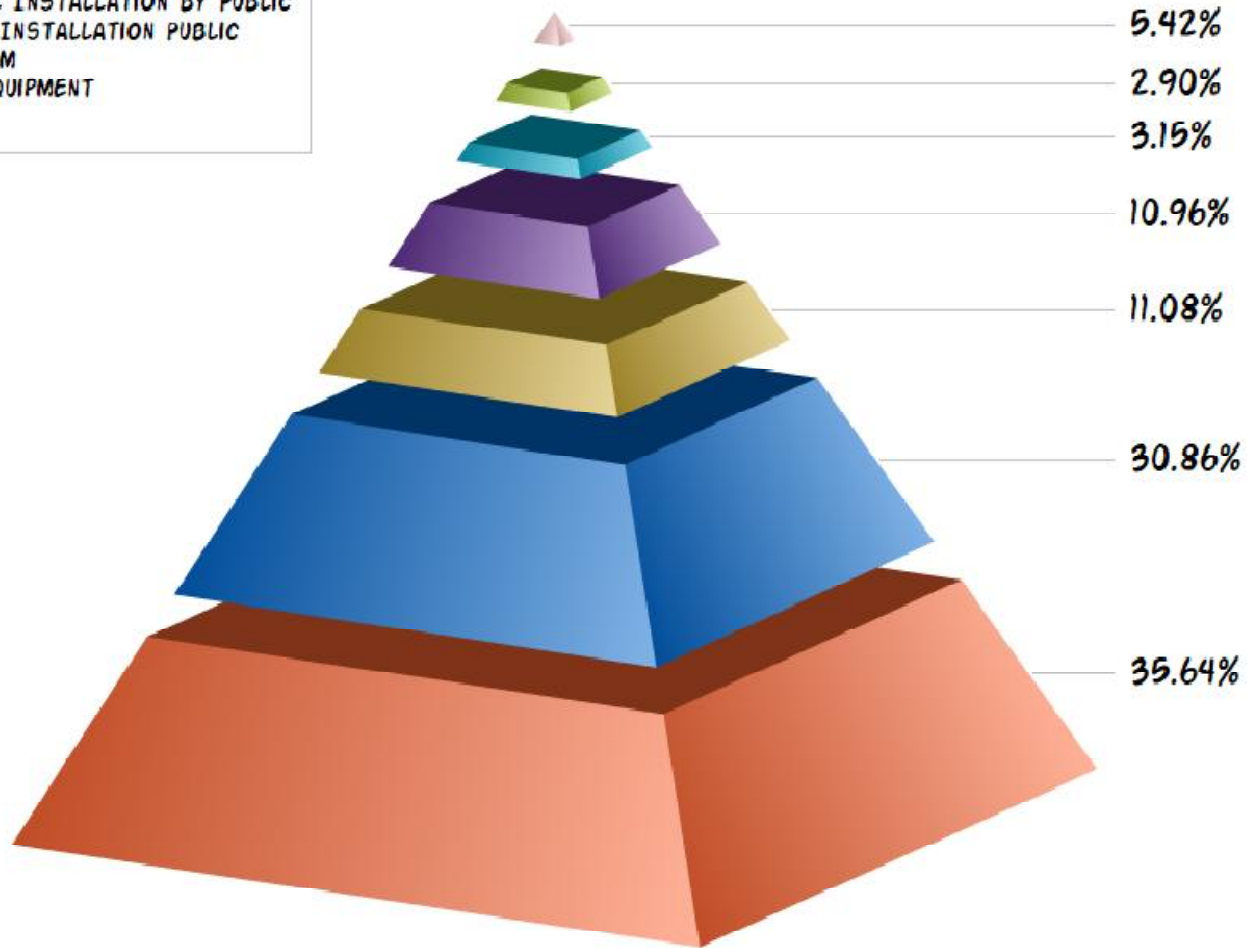


Number of Electrical Accidents Per Million Population According to States (2002 – August 2015)



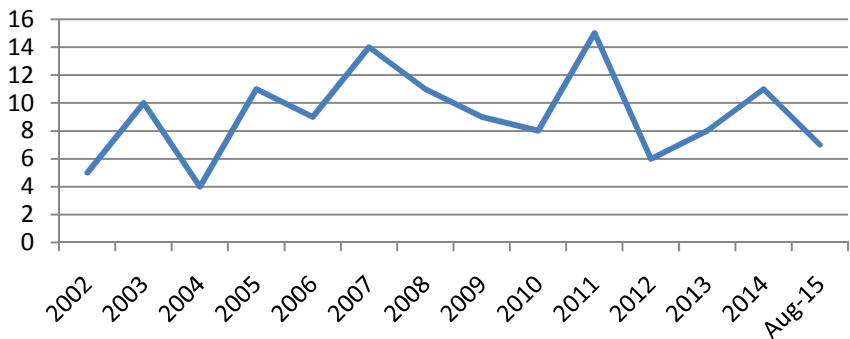
Causes of Electrical Accidents (2002 –August 2015)

- IMPROPER INSTALLATION AND MAINTENANCE
- SAFETY WORK PROCEDURES NOT COMPLIED
- ACTIVITY NEAR ELECTRICAL INSTALLATION BY PUBLIC
- TRESPASSING ELECTRICAL INSTALLATION PUBLIC
- MISUSE OF WIRING SYSTEM
- DEFECTS IN ELECTRICAL EQUIPMENT
- OTHER CAUSES

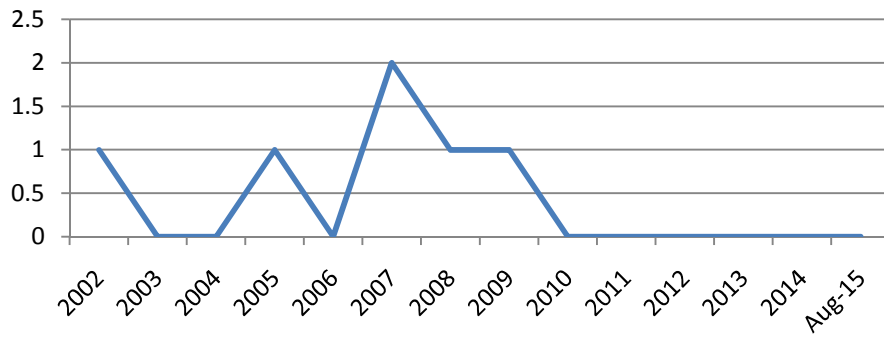


Location of Electrical Accidents (2002 – August 2015)

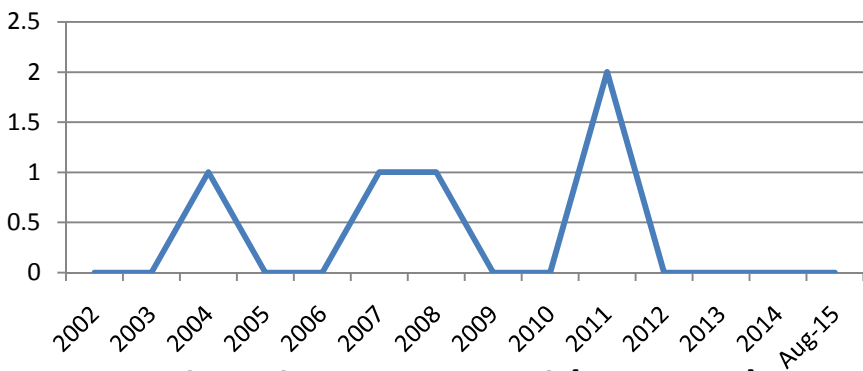
Residential Housing (128 cases)



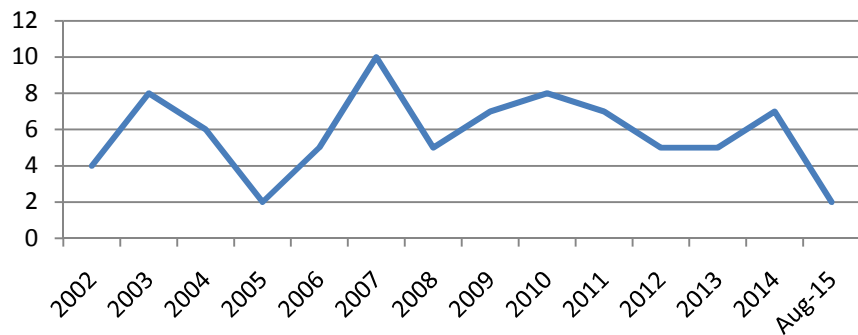
School Premises (6 cases)



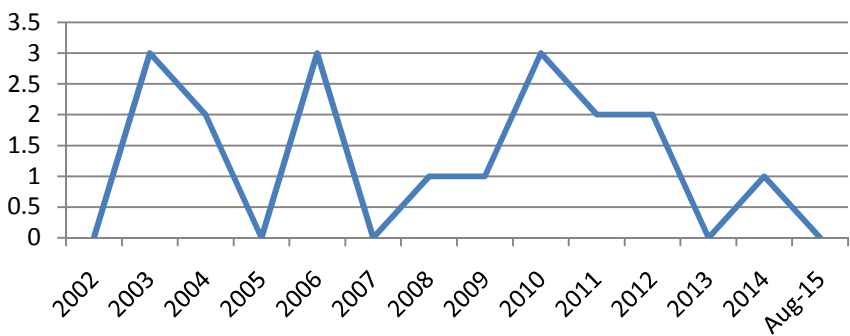
Higher Learning Institution (5 cases)



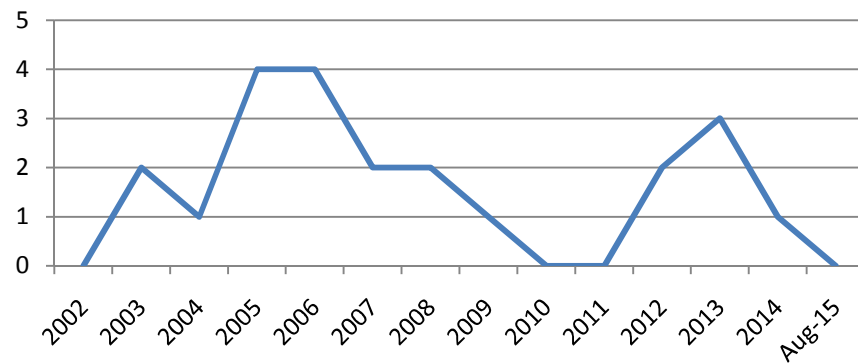
Industrial Premises (81 cases)



Local Authority Council (18 cases)

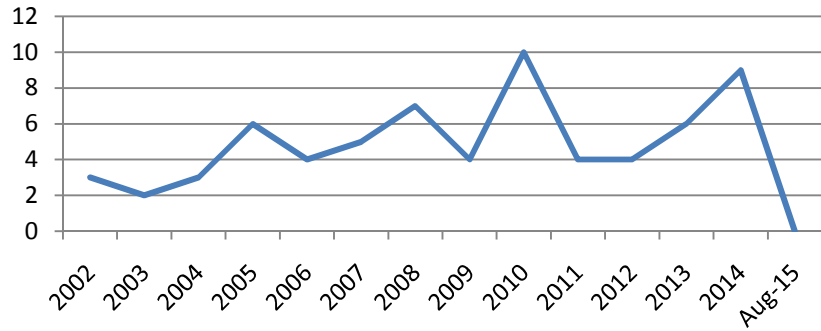


Government Premises (22 cases)

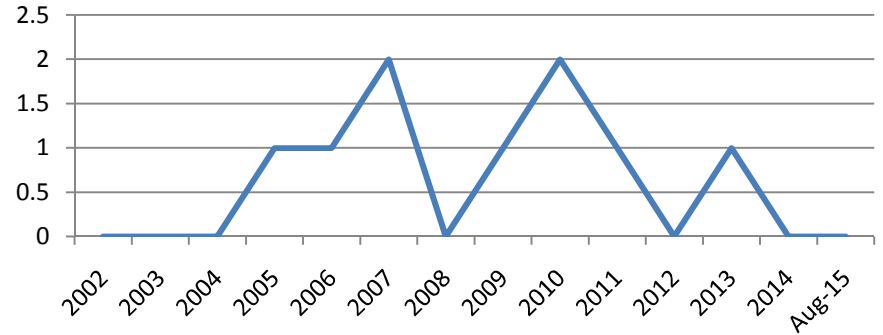


Location of Electrical Accidents (2002 –August 2015)

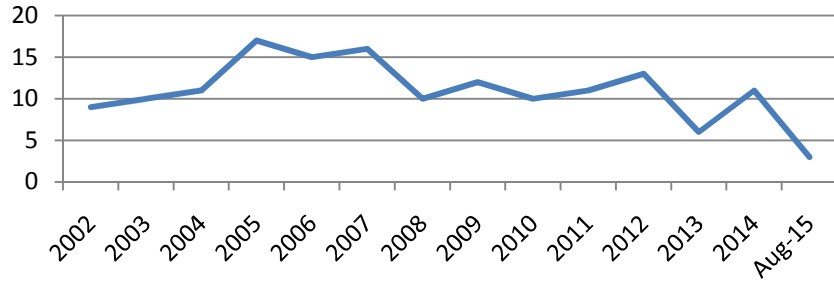
Commercial Buildings (67 cases)



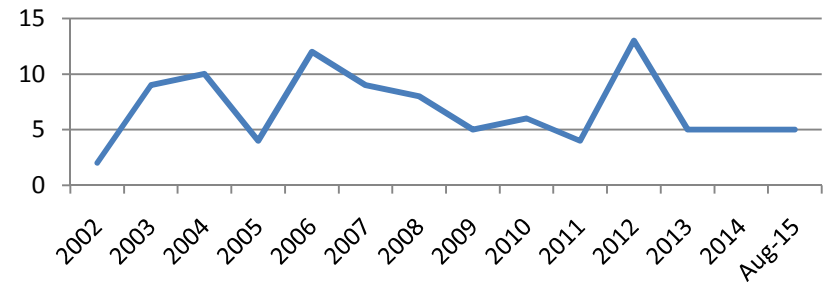
Construction Sites (9 cases)



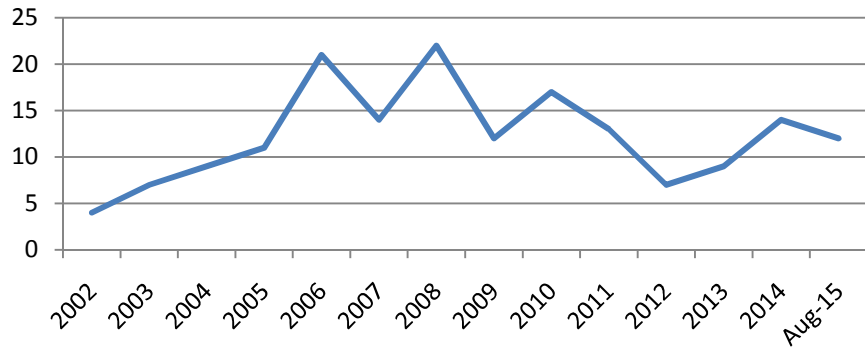
LV Overhead Lines (Utilities) (154 cases)



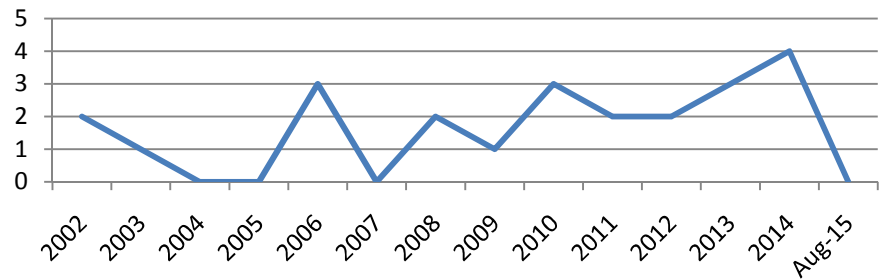
HV Overhead Lines (Utilities) (97 cases)



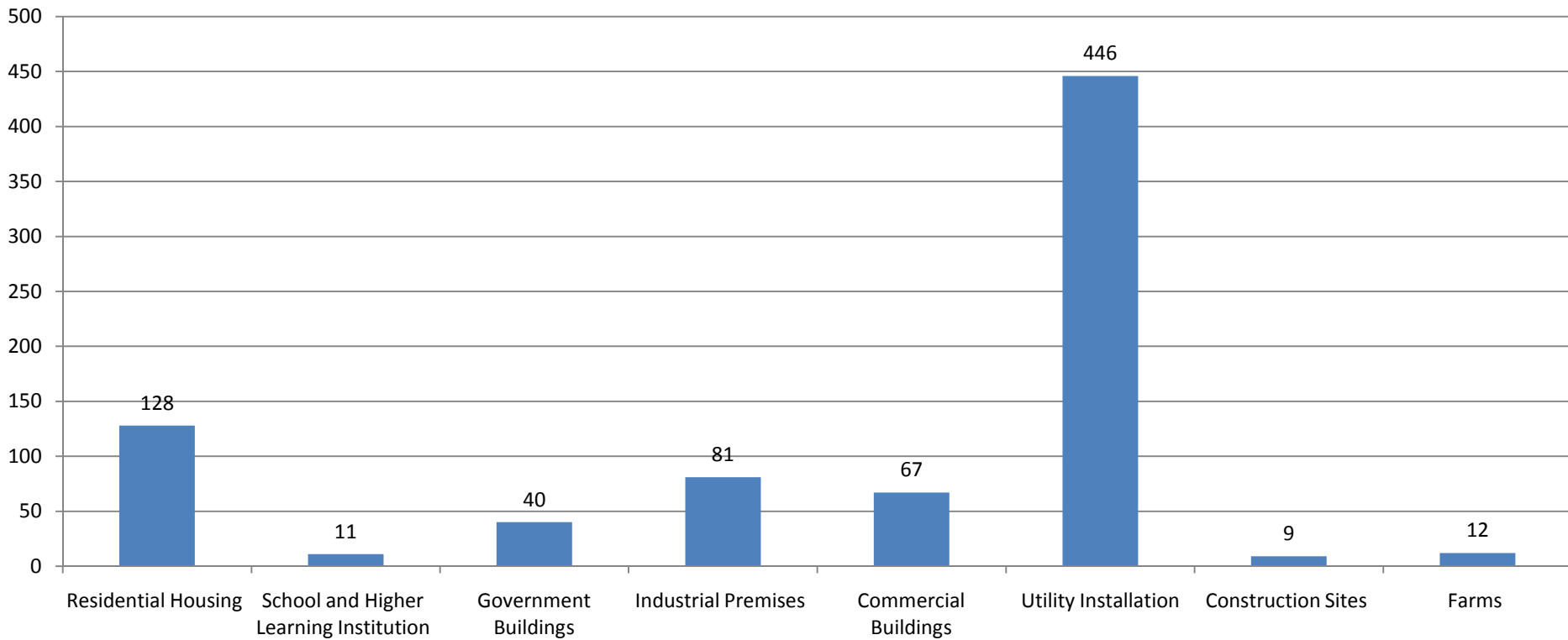
Substation (Utilities) (72 cases)



Underground Cable (Utilities) (23 cases)



Statistics of Electrical Accidents Based on 8 Categories of Site (2002 –August 2015)



Statistics of Electrical Appliance Involved in Accidents (2002 –August 2015)

Electrical Appliance	No of Cases
• Plug Top	2
• Socket Outlet	6
• Fluorescent Lamp	1
• Residual Current Device	11
• Instantaneous Water Heater	3
• Storage Water Heater	4
• Fan	1
• Television	1
• Washing Machine	1
• Refrigerator	1
• Rice Cooker	1
• Portable Power Tools	4

Statistics of Electrical Accidents According to EC Regional Office in the Year 2015 (as of Oct 2015)

No	Energy Commission Regional Office	Number of Cases		Total Cases
		Fatal	Non Fatal	
1	PETALING JAYA	3	3	6
2	IPOH	4	2	6
3	BUTTERWORTH	2	1	3
4	KOTA BHARU	1	1	2
5	KUANTAN	3	2	5
6	JOHOR BAHRU	3	2	5
7	MELAKA	0	2	2
8	KOTA KINABALU	3	3	6
9	SANDAKAN	6	0	6
	TOTAL	25	16	41
	ANNUALISED	30	19	49

Registration of Competent Person (as of 24 October 2015)

No of Competent Person Registered		22,607
No of Competent Person Not Registered	Registration Expired	15,237
	No Record of Registration	39,585
Total Number of Competent Person		77,429

Certificates of Competency Issued (as of 24 October 2015)

Category	No of Certificates Issued
Competent Electrical Engineer	1,209
Electrical Services Engineer	242
Electrical Supervisor	227
Chargeman	45,464
Cable Jointer	474
Wireman	64,266
Total	111,882

Registration of Competent Person
(High Voltage) based on Number
of Certificates(as of 24 Oct 2015)

Category of Competency	Rstriction	Number of Certificates
Competent Electrical Engineer	JK1	66
Competent Electrical Engineer	JK2	102
Competent Electrical Engineer	JK3	2
Competent Electrical Engineer	JK4	62
Competent Electrical Engineer	JK5	184
Competent Electrical Engineer	JK6	15
Electrical Services Engineer	JP1	20
Electrical Services Engineer	JP2	62
Electrical Services Engineer	JP4	22
Electrical Services Engineer	JP5	15
Electrical Services Engineer	JP6	7
Chargeman	B1	394
Chargeman	B4	601
Chargeman	BO	1,773
Chargeman	BO-1	175
Chargeman	BO-2	121
Cable Jointer	PK2	59
Cable Jointer	PK3	39
Cable Jointer	PK5	1
Total		3,720

Registration of Competent Person
(Low Voltage) based on Number
of Certificates(as of 24 Oct 2015)

Category of Competency	Rstriction	Number of Certificates
Electrical Supervisor	PE1	84
Chargeman	A1	3,275
Chargeman	A4	2,594
Chargeman	AO	3,854
Chargeman	**A2	12
Chargeman	A4-1	209
Chargeman	A4-2	227
Cable Jointer	PK1	45
Wireman	PW1	1,222
Wireman	PW2	2,940
Wireman	PW3	777
Wireman	PW4	9,171
Wireman	PW5	1
Wireman	PW6	26
Total		24,437

Updates on Electricity Supply (Ammendment) 2015

-Safety Aspect-



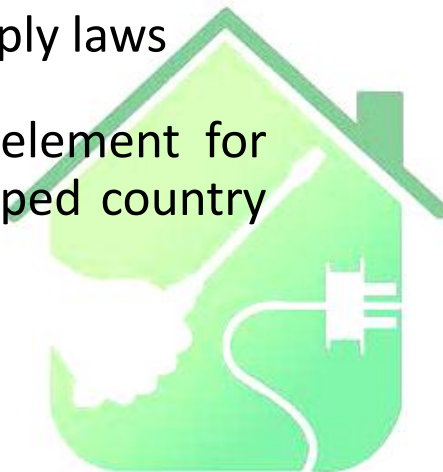
THE NEED FOR AMENDMENTS

- A reliable and affordable electricity supply is a key element in Malaysia's economic development agenda towards becoming a developed nation by the year 2020.
- Hence, there is a need to review the existing regulatory framework to enable the Malaysia Electricity Supply Industry (MESI) to become more robust, progressive, vibrant and sustainable in the near future.



OBJECTIVES OF THE AMENDMENTS

- To enhance and streamline existing provisions of the Electricity Supply Act 1990 (Act 447) in line with developments and practices in the electricity supply industry in the areas of:
 - Governance framework
 - Improving safety practices
 - Protection of consumer interests
 - Application of latest technology
- To enable more effective enforcement of electricity supply laws
- A reliable and affordable electricity supply is a key element for Malaysian's economic development to become developed country by year 2020



SUMMARY OF AMENDMENTS

To Enhance Governance Of The Industry	To Improve Safety Practices
<p>Licensing Of Electricity Supply Activities</p> <p>Addition or Amendment of Terms and Conditions of Licence</p> <p>Additional functions and powers of the Commission</p> <p>Authorization Of System Operator And Single Buyer</p> <p>Arrangement for Electricity Procurement</p> <p>Supply Infrastructure Information Security</p> <p>Power to obtain information by Commission</p> <p>Power of Commission to audit</p> <p>Power of Minister to make new Regulations</p>	<p>Responsibilities of Licensee For Safety</p> <p>Responsibility of Non Domestic Electrical Installation Owner or Operator, Retail Licensee and Generation Licensee For Safety</p> <p>Undertaking Electrical Work</p> <p>Responsibility in relation to Non-electrical Work</p> <p>Compliance Inspection</p>

SUMMARY OF AMENDMENTS (cont'd)

To Protect Consumer Interests	To Enable More Effective Enforcement
<p>Licensee's obligation to supply, and rectify, repair and compensate damage of consumers where licensee found to be negligent</p> <p>Exceptions to Licensee's obligation to supply</p> <p>Tariff determination by the Commission</p> <p>Recovery of expenses by consumers</p> <p>Consumer Supply Agreement to be approved by Commission</p> <p>Standard of Performance of supply and service by Licensees</p>	<p>Authorized officer's investigation and evidence gathering powers</p> <p>Heavier punishment for offences</p> <p>New offences and punishment</p> <p>Dispute resolution and arbitration</p> <p>Disconnection of supply due to electricity theft</p> <p>Compounding of offences</p>

SUMMARY OF AMENDMENTS (cont'd)

To Protect Consumer Interests	To Enable More Effective Enforcement
<p data-bbox="67 442 917 521">Testing and verification of electricity meters in accordance with the Act and subsidiary legislation</p> <p data-bbox="67 592 917 714">New metering provisions for Prepaid, smart metering, smart grid, telemetering and Automated Metering Infrastructure.</p> <p data-bbox="67 785 724 821">Usage of supply lines for communications</p> <p data-bbox="67 878 444 913">Electricity Industry Fund</p>	<p data-bbox="956 471 1758 506">Retention and return of documents by Commission</p>

Ammendment of Electricity Supply Act with Respect to Improving Safety Practices

- 1) Responsibilities of Licensee For Safety (new section 33B)
- 2) Responsibility of Non Domestic Electrical Installation Owner or Operator, Retail Licensee and Generation Licensee For Safety (new section 33C)
- 3) Undertaking Electrical Work (new section 33D)
- 4) Responsibility in relation to Non-electrical Work (new section 33E)
- 5) Compliance Inspection (new section 33F)



Responsibilities of Licensee for Safety (new section 33B)

- Licensee to comply with the Electrical Infrastructure Safety Code
- Licensee to prepare safety management plan.

Rationale:

- mandating of relevant safety codes will ensure better alignment of legal requirements with industry practices and will facilitate development of industry best practices.
- supply licensees are given duties and responsibilities to ensure safety of the supply infrastructure in accordance with accepted safety management plans.
- enable licensees to continuously improve safety practices through the use of innovative and effective methods and eventually to achieve maximum safety.



cont..

Responsibility of Non-Domestic Electrical Installation Owner or Operator, Retail Licensee And Licensee For A Private Installation for Safety (new section 33C)

- Non-domestic electrical installation owners or operators, retail licensee and licensee for a private installation to comply with non-domestic installation safety code, prepare and comply with safety management programme.

Rationale:

- owners or operators of electrical installations, retail licensee and licensee for a private installation are given duties to ensure safety in the operation, maintenance and repair of the installations according to safety programmes prepared by them.
- enable owners or operators of electrical installations to be more proactive in ensuring safety of installations under their control.



Undertaking Electrical Work (New section 33D)

- A competent person or a person under control of a competent person shall carry out work in accordance with the electrical infrastructure safety code or non-domestic electrical installation safety code.

Rationale:

- Electrical work to be carried out in accordance with the safety code to ensure safety of the installation.



Responsibility relating to Non-electrical Work (New section 33E)

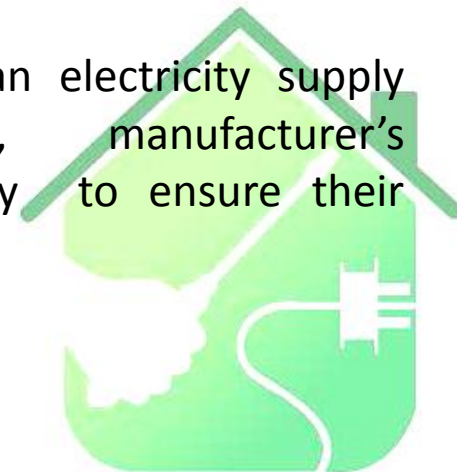
- Any person who constructs, builds, renovates or undertakes work other than electrical work shall ensure that the work shall not cause electricity related injury to any person or damage to any property.

Rationale:

- Enables developers and/or contractors who construct, build or renovate buildings or does any non-electrical work to be more proactive in ensuring that the work is carried out safely and shall not interfere with any area's or building's electrical systems.

Compliance inspection (New section 33F)

- The Commission may inspect or cause to be inspected an electricity supply infrastructure, non-domestic electrical installation, manufacturer's premises, importer's premises, conformity assessment body to ensure their compliance with the requirements of the law.



THANK YOU