



Communications Program

For

Electrical Engineering Safety

2008 - 2012

Spreading the Word on Electrical Engineering Safety

*Strategy for communicating Electrical OH&S material
To targeted audiences
associated with the NSW Mining and Extractive Industries*

TEST BEFORE YOU TOUCH

NO LIVE LINE WORK

Foreword

This document should be read in conjunction with the Strategic Plan for Electrical Engineering Safety in NSW Mines (Coal, Metalliferous & Extractive). It deals specifically with a program of communicating with key stakeholders in the mining industry. Communication is a key element in achieving specific DPI Mine Safety targets for Electrical Engineering Safety within the mining industry.

Consultation is a legislative requirement for employers and DPI communications can facilitate that and give content to it, through which industry culture can be changed to accept the importance of electrical engineering safety. A structured communication program can provide:

- Useful information for all industry stakeholders essential to implementing good engineering.
- Reinforce workplace responsibility for OHS management,
- Provide advice, direction and guidance material emphasising outcomes to be achieved, in the area of risk management

The DPI Strategic Plan for Electrical Engineering Safety identifies the need for an established communications strategy that will:

- Position the DPI within the world wide network of electrical OH&S communications,
- Facilitate the acquisition of relevant OH&S data,
- Provide the frame work for value adding to information
- Reinforce workplace responsibility for OHS management,
- Provide advice, direction and guidance material emphasising outcomes to be achieved, in the area of risk management
- Identify and inform of, emerging issues (eg high voltage distribution underground, safety critical systems, high energy explosion protection, communication technology),
- Ensure that the full range of industry participants are provided with quality information in a timely manner, and
- Facilitate intelligent and informed decision making in maters of electrical engineering safety

John Francis Waudby
Senior Inspector of Electrical Engineering



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Part 1 – Communications Policy

*Background Information about the need
for a
documented communications program*



The Case for Effective OH&S Communication

WHAT IS IT?

The transfer of information to improve OH&S systems, learn through promoting best practice from within the minerals industry and others industries. Promote learning from mistakes or problems to enable prevention of similar incidents.

HISTORICAL CONTEXT

Traditionally the coal mines inspectorate has relied on an annual electrical safety seminar, regular meetings with mine electrical engineers, face to face contact with mine personnel, OEM's, workshops, standard committees and consultants and safety alerts. The only planned activities were the annual seminar and mine electrical engineers meetings.

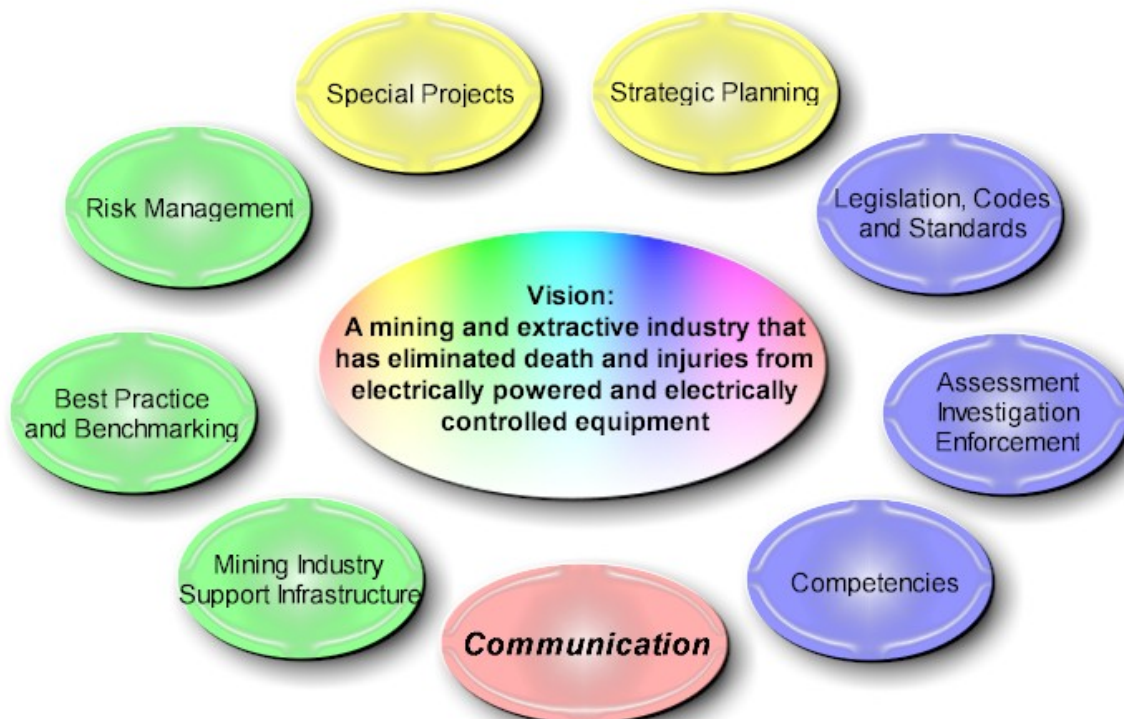
WHAT'S HAPPENING NOW

Communication is a central and key area for the strategic plan for Electrical Engineering Safety as such it warrants a specific program. To maximise the benefit and to allow the efficient use of DPI resources there has to be a move from a somewhat ad-hoc approach to communication to a planned, systematic and consistent approach to communication in both the coal industry and the metal extractive industries.

PLANNING

The DPI Corporate Plan, Mine Safety Business Plans, all the recent mine safety reviews and the Strategic and Strategic Plan for Electrical Engineering Safety in NSW Mines (Coal, Metalliferous & Extractive) all rely on effective communications to improve safety in the mining industry.

Strategic and Operational Plan



Within the Strategic Plan for Electrical Engineering Safety in NSW Mines (Coal, Metalliferous & Extractive) a key element is communications. This plan requires the following:

- Establish an extensive network (interstate and overseas regulators (mining and electrical), non-mining electrical industry, mining industry etc.).
- Communicate widely to the mining industry, mining support industries and the community using the “Communication Program”.

The plan also specifies objectives and outcomes.

OBJECTIVES

Electrical Engineering Safety issues are effectively communicated to industry by implementing the Communication Program.

Annual Electrical Engineering Safety seminar conducted.

Regional Electrical Engineering Safety seminars / meetings conducted

Electrical Engineering Safety section on the website

OUTCOMES

ALL industry organisations are aware of, and understand the Electrical Engineering Safety issues.

An extensive network of electrical personnel is established.

A wide range of Electrical Engineering Safety advice is readily available to all stakeholders.

ELECTRICAL ENGINEERING SAFETY KEY RISK CONTROLS

The strategic and operational plan also identifies the key risk controls that must be in place, usually in combination, and which are critical to realising the vision. The communications program is designed to inform in each of these aspects. These key Electrical Engineering Safety risk controls are:

- Electrical technology management systems incorporating emergency management and incident investigation
- Competency (of people engaged in electrical plant and systems throughout the life cycle).
- Fit for purpose (FFP) electrical plant.
 - Electrical protection
 - Earthing and lightning protection
 - Electrical plant (cables and apparatus) in non hazardous areas (HV, LV, ELV)
 - Machine (M/C) Control circuits - Functional safety, Field devices = ELV
 - Electrical plant (cables & apparatus) in a hazardous zone (includes gas monitoring) (HV, LV, ELV)
 - Signage
- Safe Procedures
 - Hazardous zone classification and identification
 - Removal/restoration of power procedures
 - Isolation procedures
 - Electrical testing procedures
 - Electric welding procedures
 - Electric shock and burn protocols
 - Use of portable apparatus U/G (underground)
 - Use of remote controlled plant
 - High Voltage procedures
 - Work near overhead lines



Purpose of this Document

IEE Operating Model



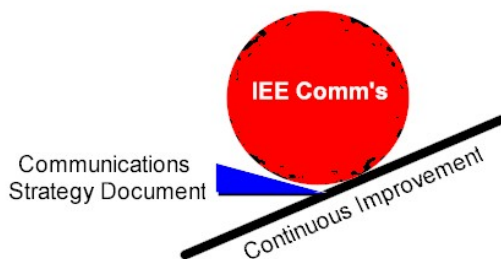
For a number of years The Inspectors of Electrical Engineering have been actively engaged in an improvement project designed to deliver a best practice model for electrical engineering safety.

The result is a construct consisting of a solid foundation based on the Corporate Plan, RIMS, and the Strategic Plan for Electrical Engineering Safety, through to development of documented assessment criteria, and work plans that are designed to deliver our objectives in accordance with identified priorities.

The IEE will continually improve communications processes so that they always reflect the aspirations of the DPI and the Mining Industry.

Continuous improvement can be likened to a team trying to roll a heavy wheel up a grade. Advances come as a result of concerted effort, sometimes in small increments, sometimes in great strides.

This document is intended to be the chock behind the wheel. It secures our current position, helps to prevent loss of ground, and aligns the team in terms of where we are, and helps us to see where we are going to go next.



The Communications Strategy will be used by Inspectors of Electrical Engineering to:

- Prepare work plans for a 1 year and 3 year outlook.
- Show other officers in the DPI what we are trying to do and why we are trying to do it.
- Solicit constructive comment on our communications activities to help us improve.

Other industry stakeholders will benefit from the document by being able to align their expectations with a documented plan, and participate in the flow of information knowing how and when the information will be processed and delivered.

Internal and external organisations will be able to adjust their own processes to integrate with the processes documented here for greater efficiency and effect.



Description and design

INFORMATION CONTENT

The following is an indicative list of the type of information to be communicated.

- a) The DPI vision for electrical engineering safety.
- b) The DPI definition of Electrical Engineering Safety
- c) The DPI strategic plan for mining Electrical Engineering Safety – including the philosophy of operation.
- d) Electrical Engineering Safety key risk controls
- e) Urgent/significant safety matters relating to Electrical Engineering Safety
- f) Accident/incident statistics relating to Electrical Engineering Safety
- g) Industry performance relating to Electrical Engineering Safety key risk controls
- h) Contemporary engineering methods relating to electrical engineering safety
- i) Emerging electrical technology safety issues
- j) OH&S management systems
- k) Transition from approvals to national and international certification schemes, including provision of electrical approvals information
- l) Transition from examining competent persons to national competency standards
- m) Remote control mining equipment issues and performance
- n) Legislation

TARGET AUDIENCE

The intended audience are those people and organisations that influence Electrical Engineering Safety within the coal industry and the metalliferous mining and extractives industry.

The following have been identified as stakeholders in the DPI IEE communications process.

- a) Mine Operators
- b) Managers of Electrical Engineering
- c) Mine electricity workers
- d) Mine electrical equipment operators
- e) Electrical contractors to mines
- f) Mine OHS professionals
- g) Mine supervisors (all disciplines)
- h) Electrical Engineering Consultants
- i) Mines Inspectors
- j) Mining Check Inspectors
- k) Electrical Check Inspectors
- l) Mine Managers association
- m) Minerals Council
- n) Mine Safety Advisory Committees
- o) DPI Internal personnel
- p) OEMs
- q) Equipment repairers
- r) Licensed Workshops
- s) Approval and Certificate of Conformity Holders
- t) Australian Standards Committee members
- u) International Standards (IEC) committee members and bodies



- v) Hunter Industry Electrical Safety Network (HIESN)
- w) Mining Electrical and Mining Mechanical Engineers Society (MEMMES) of the Institution of Engineers, Australia.
- x) Regulators in other States
- y) Regulators overseas
- z) Certification Bodies – Australia and overseas
- aa) Test Laboratories – Australia and overseas
- bb) Local Supply Authorities

METHODS OF COMMUNICATION

This strategy covers the following instruments for communicating with stakeholders.

- a) Electrical Engineering Safety Alerts & Safety Bulletins
- b) Electrical Engineering Incident Summaries & Statistics
- c) Letters to Industry Groups
- d) Letters to Aust Standard and IEC Standard Committees
- e) Presentations
- f) Mining Industry Seminars/forums
 - Mining Industry Regional Seminars & forums
 - Departmental seminars/forums
 - Departmental regional meetings
 - Electricity industry seminars/forums
- g) Published papers
- h) Reports to industry safety committees
- i) Website
 - DPI – Mining electrical engineering safety
 - Links to other websites
- j) Special interest meetings – eg cable repair shops
- k) Internal DPI reporting processes.
- l) DPI Mine Safety News
- m) DPI Information Unit

MEDIA FOR COMMUNICATION

The available media for distribution of communications are as follows:

- a) Mail out
- b) Hand deliver to sites
- c) Table at meetings
- d) E-mail direct to individuals
- e) Email to organizations for redistribution
- f) Post on the DPI web site
- g) Have posted on other organisation web site
- h) Seminars / forums

ORIGINATORS OF COMMUNICATIONS

The persons listed have a role in originating communications to industry stakeholders.

- a) Chief Inspector
- b) Information Unit
- c) Manager of Technical Services



- d) Senior Inspector of Electrical Engineering
- e) Area Managers
- f) Inspectors of Electrical Engineering (IEE)
- g) Mine Safety Officer Electrical Engineering (MSOEE)
- h) Senior Test Electrical engineer
- i) Other Disciplines of Mine Safety Operations and the Mine Safety Technology Centre



Part 2 – Communications Products

*Detailed description
of the
available communications
products and methods*



Electrical Engineering Safety Alerts / Bulletins

PURPOSE

To inform “industry” of an Electrical Engineering Safety risk that warrants immediate attention at ALL operations.

FORMAT

Safety alert format – Discrete event
Safety Bulletin – A number of events

TRIGGER

Reportable occurrence, high risk event that is not a notifiable incident, notifications by Original Equipment Manufacturer / supplier of potential issues, notification by a certification Body or Test Laboratory, adverse trend in incident statistics.

INITIATOR

These will generally be initiated by an IEE / MSOEE as a response to information arising from an investigation into an injury, dangerous occurrence, notifiable incident or other significant event.

ADDRESSEE

The addressee will necessarily be the Mine Operator, , but it is intended that the information and requirements in the Electrical Engineering Safety alert / bulletin will be interpreted and implemented by persons with the necessary competence to do so.

INTENDED AUDIENCE

The intended audience will generally be the Mine Operator and Managers of Electrical Engineering and Competent electrical Engineers nominated in the Mine Management Structure, other mine electrical staff, electrical contractors, consultants, service providers and other contractors.

PROCESS ON RECEIVAL

The manner in which safety alerts / bulletins are managed when received will vary from site to site. A simple process representing good practice is attached for reference. This can be shown to a site manager, for the purpose of comparison with the process already in place. It is intended to generate discussion about any identified gaps in the way that Electrical Engineering Safety alerts / bulletins are managed on site.

GOAL

All high risk incidents have a safety alert issued.
All recurring or emerging issues that are increasing risk have a safety bulletin issued

OBJECTIVE

The learning points from ALL High risk incidents are communicated to the mining industry.
The industry is informed of emerging issues in a timely manner
Industry acts on safety alerts / bulletins.

MEASURE

% of safety alerts & Safety Bulletins published
% of operations responding to safety alerts

TARGET

100%

REVIEW POINT

IEE meeting
Area meeting



Presentations to Industry

PURPOSE

To align electrical safety management practices in metalliferous and extractives operations and coal operations with best practice.

FORMAT

Formats can vary from Power Point presentations, overheads, presentation of a paper, discussion groups, question and answer forum etc

TRIGGER

- a) Work plans – Long term Seminar schedule
- b) Strategic plan – the what we communicate
- c) High risk incident
- d) Numerous incidents with common causal factors
- e) Emerging issues

INITIATOR

Each seminar / presentation will be initiated through consultation between the Senior Inspector of Electrical Engineering and the individual IEE / MSOEE

ADDRESSEE

Will vary depending on the scope and nature of the presentation.

Pre event information about Electrical Engineering Safety Seminars will be directed to

- a) Mine Operators
- b) Electrical Engineers
- c) Electrical Contractors
- d) Electrical Supply Authorities

A mailing list will be managed by the DPI information unit

INTENDED AUDIENCE

- a) Mine Operator
- b) Electrical Engineers
- c) Electrical Supervisors
- d) Consulting Electrical Engineers
- e) Electrical Contractors
- f) Manufacturers and Suppliers of electrical equipment
- g) Electrical Supply Authorities
- h) Service industry

COMMUNICATIONS MEDIUM

Pre event material by mail.

GOAL

To communicate the what to all operations

OBJECTIVE

Operations are aware of the relevant risk controls and implement actions to control associated risks.



MEASURE

Number of risk control per year

TARGET

1 risk control/year

Vision once/year

Electrical engineering safety/year

1 issue/year

Communicated to 80% of target audience

REVIEW

IEE meeting – strategic plan



Electrical Engineering Safety Seminar

PURPOSE

To inform, make aware and educate the target audience in the areas of electrical engineering key risk controls

FORMAT

Formats can vary from Power Point presentations, overheads, presentation of a paper, discussion groups, question and answer forum etc

TRIGGER

Electrical Engineering Safety Seminar will be held annually around October/November

INITIATOR

The Electrical Engineering Safety seminar is initiated by the SIEE. A convenor is appointed from among the IEE / MSO each year.

The DPI information unit to manage the logistics of the event.

ADDRESSEE

Refer to target audience

INTENDED AUDIENCE

Electrical engineers from mining operations.

Electrical contractors.

OEMs

Electricity supply Authorities.

Service industry

COMMUNICATIONS MEDIUM

Pre event information by mail out.

During event, direct delivery to assembled audience.

GOAL

Communicate electrical engineering safety

Networking

OBJECTIVE

Industry aware of electrical engineering safety

MEASURE

Number of attendees

Survey

TARGET

150 attendees

Satisfaction above average

REVIEW

IEE meeting



Letters to Industry

PURPOSE

Inform of major changes to safety related standards, guidelines, schemes and DPI methods
Request action

FORMAT

DPI letterhead

TRIGGER

Strategic plan
Special project
Information of an issue that is state-wide

INITIATOR

IEE/MOEE

ADDRESSEE

Mine Operator, Managers of engineering (Electrical, Mechanical and Mining as appropriate), Approval /
Certificate holders, licensed workshops.

COMMUNICATIONS MEDIUM

Letter
Website

GOAL

Letters are written and forwarded on every occasion where the need is identified.

OBJECTIVE

All operations are aware and review of possible issue and/or status

MEASURE

80% of operations address relevant issue

TARGET

100% relevant issues

REVIEW

IEE meeting



Website

PURPOSE

Inform and make information available worldwide.

FORMAT

Specific pages on the DPI website containing:

- Vision
- Electrical Engineering safety
- DPI strategic plan
- Incident statistics
- Incident summaries
- Information on Electrical Engineering Safety key risk controls
- Major issues
- Status of electrical approvals – equipment and workshops
- Status of standards and guidelines
- Status of projects – IS review, remote control, transition to national schemes.
- Approvals database
- Registration
- Major changes to safety related standards, guidelines, schemes and DPI methods
- Reports on assessments
- Cable damage statistics
- Examples of electrical equipment that is not fit for purpose
- Links to other organisations

TRIGGER

Strategic plan

Special project

Information of an issue that is state wide

INITIATOR

IEE/MOEE

REVIEWER

SIEE

INTENDED AUDIENCE

All - Refer target audience

COMMUNICATIONS MEDIUM

World Wide Web

Goal

Communicate Electrical Engineering Safety issues and performance



OBJECTIVE

Worldwide communication of important Electrical Engineering Safety issues.

MEASURE

Number of hits

TARGET

1000 hits/year

REVIEW

IEE meeting



Internal Reporting

PURPOSE

Advise Area Managers of planned activities.
Inform Area Managers of IEE progress against planned activities.

FORMAT

Report

TRIGGER

IEE meeting.

INITIATOR

SIEE

ADDRESSEE

Area Managers, Chief Inspector

COMMUNICATIONS MEDIUM

Email report.

GOAL

Two reports per year produced and delivered.
Reports produced within stated time frame.

OBJECTIVE

Area Managers are aware of all IEE planned strategic activities, progress to date, obstacles and significant issues.

MEASURE

Subjective feedback from Area Managers

TARGET

All Area Managers report that positive value is obtained.

REVIEW

IEE meeting.

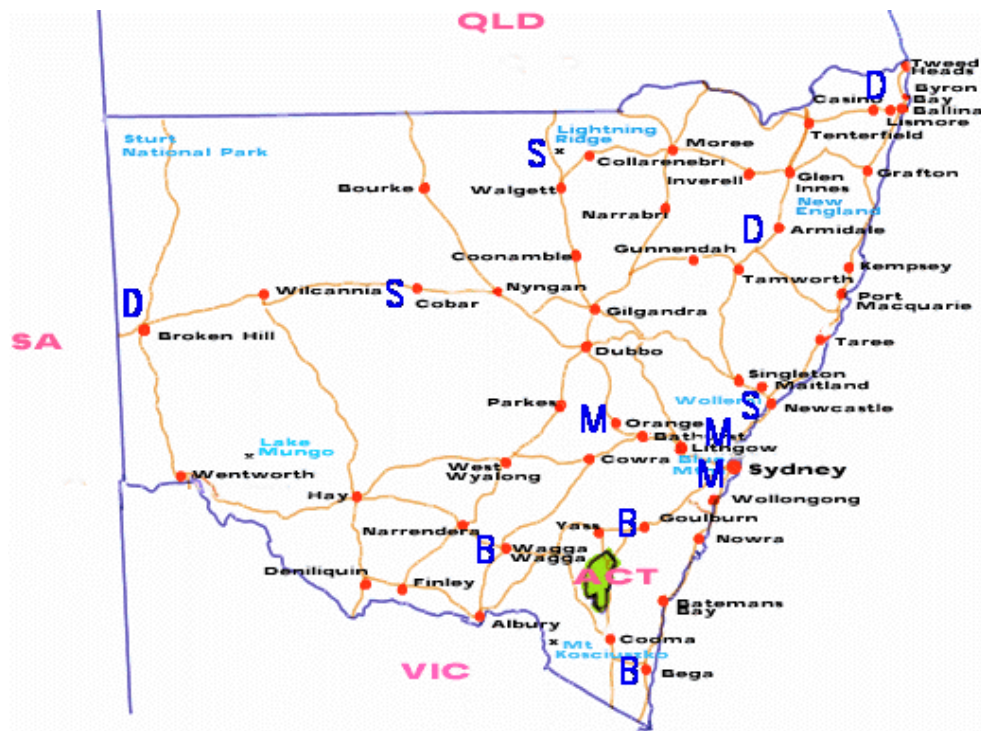


Appendix A – Suggested Process for an Operation to deal with Electrical Safety Alerts / Bulletins.

1. All Electrical Safety Alerts / Bulletins (ESAB) should be forwarded by the DPI to the full distribution list. It is up to the operation to determine the applicability or otherwise.
2. The principal entry point at an Operation for an ESAB will be the person nominated by the Operator. The Safety Alert Process will manage the flow of communications from this Safety Alert. Any other ESAB received at the operation will be regarded as fortuitous additional communications.
3. The person nominated by the Operator will make the initial assessment regarding applicability to the site, taking expert advice from others as required. If the ESAB is not applicable, it will be marked accordingly and stored in the site's register of OH&S safety bulletins. The purpose is to maintain a complete and continuous auditable record of OH&S communications material.
4. If the ESAB is applicable, the manager will mark it accordingly and store it in the site's register of OH&S safety bulletins. A copy will be routed to the person with responsibility for the area affected, along with any initial recommendations made by the operator.
5. The ESAB will be read out to relevant sectors of the workforce at the next available opportunity to conduct a tool box talk. A record of the names of attendees will be kept.
6. The ESAB will be posted on the designated noticeboard. It will remain on display until the completion of all tool box talks, and all actions have been closed out, or 28 days, whichever is the greater.
7. An assessment of the site for initial compliance with the recommendations in the safety alert will be commissioned by the Manager of Electrical Engineering. Where a non compliance is identified, the Manager of Electrical Engineering will report in writing to the operator.
8. Actions required by the ESAB to be carried out at the site will be initiated in the form of a Work Order or similar system, whereby the actions can be tracked and managed. A record of each non conformance should be made in the defect management system. A time for completion of each action will be set.
9. When the actions are complete, a file note will be placed in the register to accompany the ESAB.
10. On an annual basis, the register of ESAB will be reviewed, to ensure that changes that have taken place at the site have given due regard to any previously existing Safety Alerts / Bulletins, including those that may have not been applicable at the time.



Appendix B: Regional Seminars



A schedule of regional seminars, forums and meetings will be developed on an annual basis.

Target venues are:

- Cobar**
- Orange**
- Broken Hill**
- Queanbeyan**
- Lightning Ridge**
- Armidale**
- Bega**
- Penrith / Londonderry**
- Maitland / Thornton**
- Lismore**
- Wagga Wagga**

Process

- Prepare presentation materials
- Conduct Seminars per Schedule
- Include Q & A forum to encourage two way communications.
- Include two to three local mine site assessments
- Follow up with feed back from Q & A sessions

Electrical engineering contacts will be encouraged to “manage” their own forums and invite the DPI to participate in the forum.

