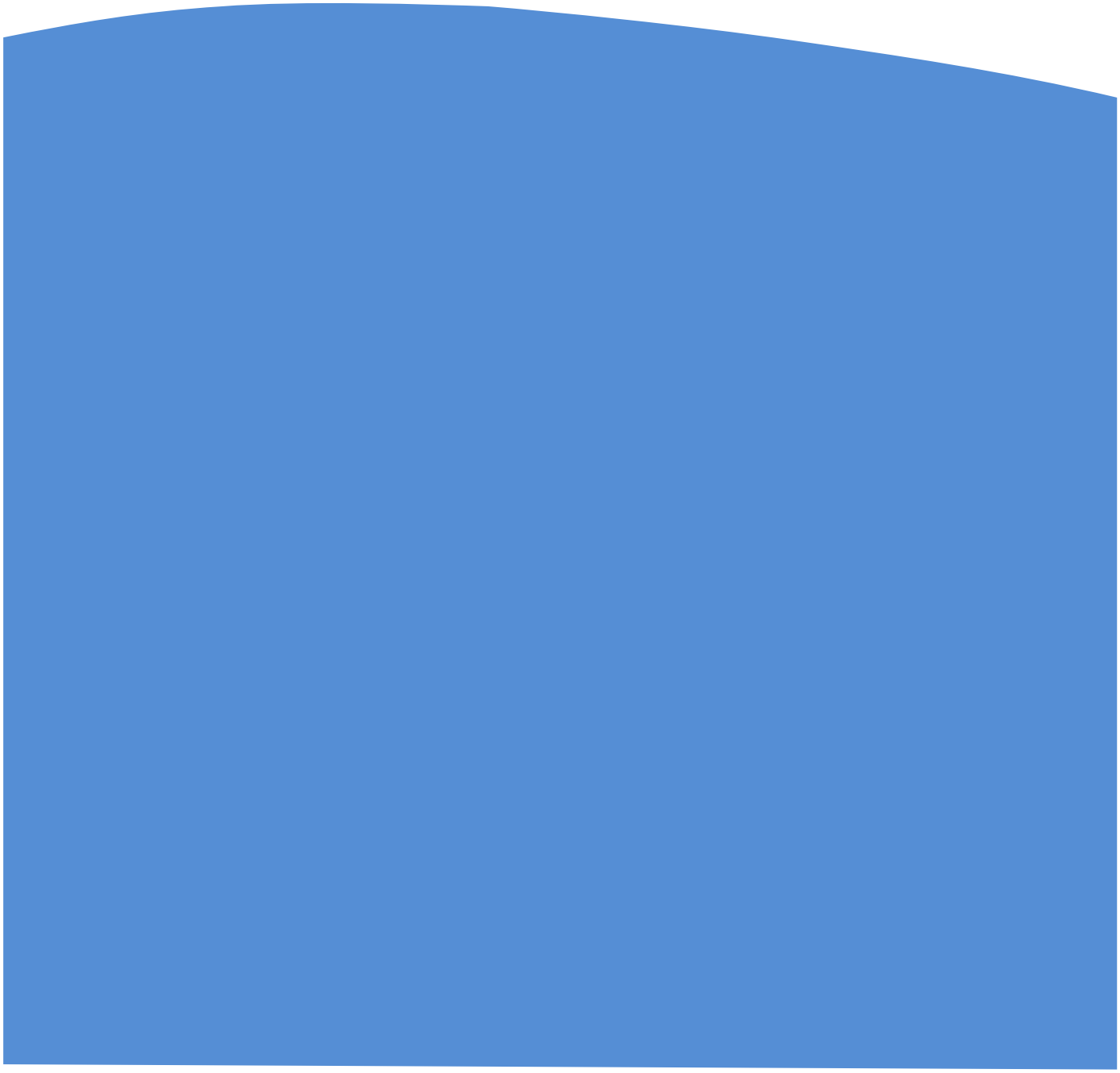
Department of Energy & Climate Change

Energy Emergencies Executive Committee Annual Report 2014



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Ministerial Foreword

Ensuring a secure energy supply is a critical to the work of the Department of Energy and Climate Change. The UK is one of the most energy secure countries in the world and it is important we continue to remain vigilant. Risks from severe weather, terrorist attacks, technical failure and industrial action can be mitigated but it is impossible to avoid them entirely.

The long standing working relationship between DECC and industry is vital to our resilience. At the centre of this, E3, its committee and its task groups, co-ordinate resilience planning across the energy industry. E3C is a real partnership between government, the regulator and industry, which ensures a joined up approach to emergency response and recovery.

The 2014 Annual Report summarises the actions and achievements of the E3C over the past year. As a particularly busy year for many, the quantity and quality of work that has been undertaken by the task groups is impressive and extremely valuable. It is evident that the work of the Committee continues to contribute greatly to the resilience of the energy sector and, with the future challenges we face, I am confident it will continue to do so next year and beyond.

Rt Hon Matt Hancock MP

Minister of State

Foreword from E3C Chair

The Energy Emergencies Executive (E3) and its Committee (E3C) are the principal fora for identifying both the risks and mitigating processes and actions necessary to manage the impact of emergencies affecting the supply of gas and/or electricity to consumers in GB. They are key bodies for industry, regulators and UK Government and Devolved Administrations to work together in building the resilience of energy supplies.

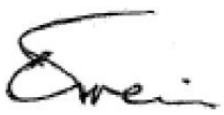
Due to the variety of issues requiring consideration, E3C devolves its activities to a number of Task Groups each with a specific focus, namely: Cyber Security, Electricity, Gas, Security, Pandemic and Communications. These task groups take responsibility for completing work plans, under the oversight of E3C and strategic direction of E3.

Following the storms experienced over the Christmas 2013 and the consequent disruption this caused to electricity supplies, E3C Task Groups have been working collaboratively both to improve the industry response and how it engages with customers. Escalation processes in advance of potential disruption and associated engineering resources required to be able to respond in the event have been reviewed, as have telephony systems and associated contact centre resources to improve the service a customer can expect during a disruption. Good industry practices have been agreed by Distribution Network Operators for informing customers of estimated supply restoration times, and social media communications. In addition a Project is underway to deliver a single national phone number for electricity customers to contact during times of supply disruption. It is anticipated that this single national number will be available from 2016.

We have continued to test our emergency plans through exercising, such as the Hopkinson workshop in July. This exercise involved many government departments and a wide range of stakeholders, where responses were tested to a scenario involving a region without electricity supplies for an extended period. Supporting processes underpinning a Flu pandemic were also reviewed and tested in advance of Exercise Cygnus.

During 2014 E3C has played a key role in implementing the new Electricity Supply Emergency Code (ESEC) arrangements for customer rota load disconnections, developing a model looking at the impact of electricity rota disconnections on the gas network, reviewing Gas Distribution Networks' strategic spares and severe weather preparedness arrangements, conducting a risk assessment of cyber security risk across GB critical infrastructure in the energy sector and carrying out threat predictive work and how to turn valuable information in to cross industry intelligence.

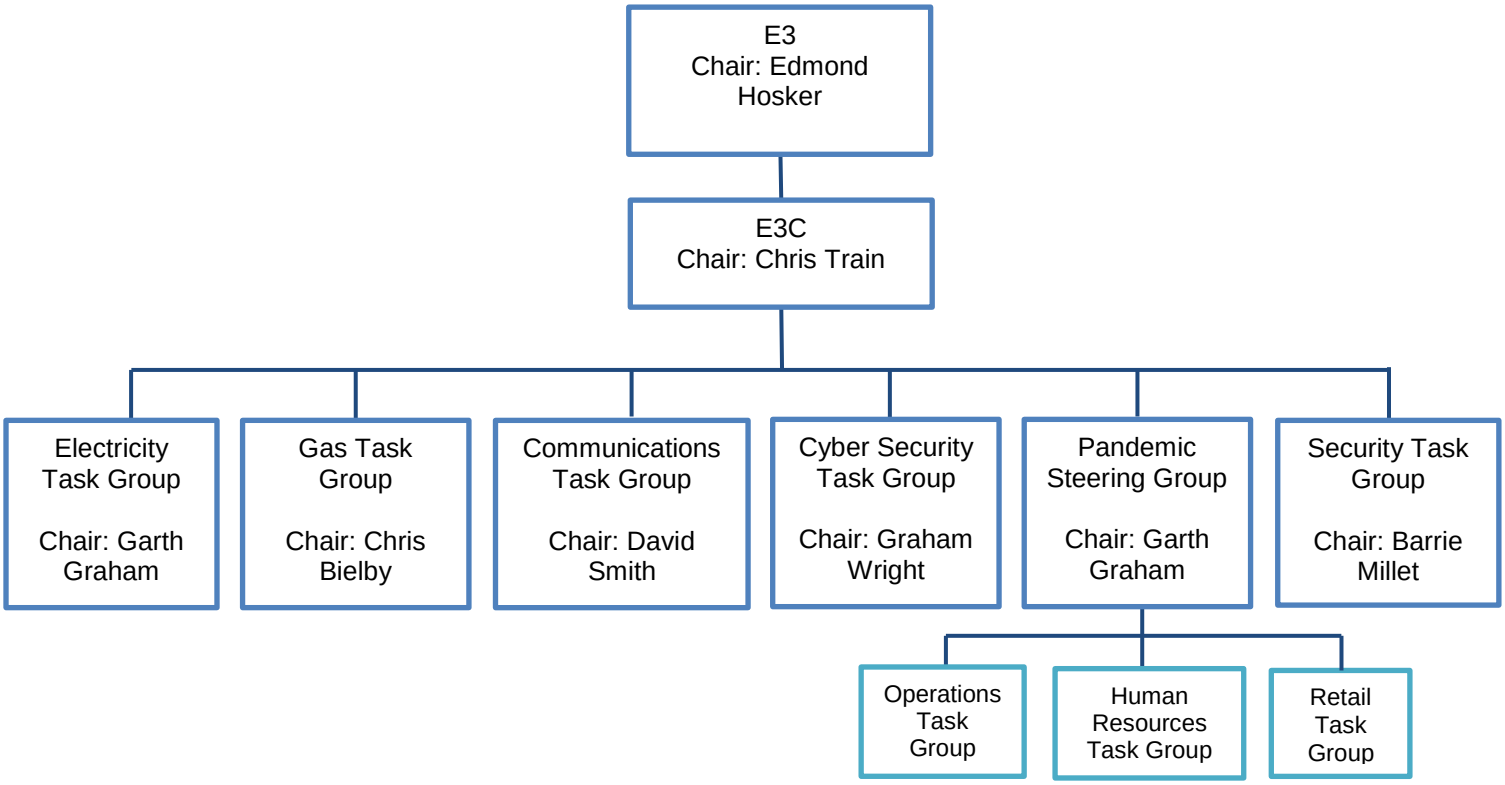
As we move into 2015 and beyond, we will need to continue to respond to the challenges we will no doubt face by building upon the significant work we have already delivered and by continuing to work collaboratively within the E3C.



Chris Train,

Chair of E3C

The Structure of E3C



Electricity Task Group

The role of the Electricity Task Group (ETG) is to ensure that the electricity sector in Great Britain is aware of, and prepared for, a variety of emergencies that may negatively impact electricity supply and, more widely, the energy sector. During the course of the past year the group has undertaken a number of significant pieces of work.

The main focus of the work this year has been to discharge four actions that arose from the Secretary of State's review, published in March, of the Christmas 2013 storms. Below we look at each action in turn and summarise the work undertaken.

Network Operators to hold a workshop to consider the development of a "reasonable worst case scenario" for call volumes

A workshop was held by the ETG in March, with a follow up meeting in April, bringing together network operators to develop a national 'reasonable worst case scenario' for a number of different potential disruptive events. Various scenarios were considered including a black start event, rota load disconnection, loss of a single grid supply point, loss of multiple primary substations and loss of transmission/ generation in-feed. The group forecast the number of customers that would potentially be affected by these events and the number of concurrent calls that would hypothetically be received as a result. The work entailed follow up work by the distribution network operators (DNOs) and was finalised in July. In addition this information has been used to review contact centre resources and also informed the Single Emergency Number (SEN) specifications.

Network Operators will develop and implement a common framework that clarifies standards expected around the identification and provision of a restoration time to customers and its subsequent proactive update in the manner agreed with the customer.

The ETG worked with the E3C Communications Task Group on this joint action. A workshop was held in May to help identify good practice relating to the standards expected around identification and provision of restoration times by network operators to customers; with a follow up meeting in June. After this a Good Practice Guide was produced. This sets out the minimum standards for the provision of supply restoration information to network customers during emergency events. In light of this Good Practice Guide DNOs are, where necessary, amending their current processes to incorporate the good practise not yet undertaken within their existing arrangements.

Network Operators will hold a workshop to share their resource and contractor management strategies.

The ETG held a meeting in April to discuss and document the resource and contractor management strategies applied by network operators. Based on this work the ETG then developed a forward looking model which gives a holistic overview of GB over-head line

resources going forward. This work will be reviewed periodically to ensure adequacy of resources in future years.

Network Operators will hold a workshop to share strategy and approach to welfare provision and deployment learning and identify best practice.

The ETG arranged two workshops, with network operators, in May and June to share the various approaches to welfare provision and deployment in order to identify best practice. From this work a Good Practice Guide, for welfare provision that customer could expect, was developed.

The guide sets out the minimum standards that customers can expect for welfare provision during emergency events; with particular emphasis on customers held within the Priority Services Register of each network operator. As with the restoration time Good Practice Guide, DNOs have where necessary, amended their current processes to incorporate the welfare good practice within their existing arrangements.

The ETG continues to monitor overseas events that have an impact on electricity supplies to see if there are learning points that might be applicable to Britain. This year has been noticeable for the fewer number of those events than in previous years (such as 'Superstorm Sandy' in North America in 2012) The ETG also continues to monitor developments with respect to a possible severe space weather event and potential mitigating actions that maybe required. This builds on work done previously on modelling the impact of space weather on network resilience, including power station transformers. In addition to this the ETG has supported DECC with its review of the Electricity Supply Emergency Code.

The ETG currently has a series of items that it will be working on over the coming year (and beyond).

Exercise Hopkinson

On 16th July 2014, DECC hosted a one-day emergency response workshop, Exercise Hopkinson, at the BIS Conference Centre, London. The event brought together a wide range of stakeholders from across Government and Industry, to explore the impacts and responses to a widespread and long-term electricity outage, based upon a scenario of the loss of power to South West England.

Members from ETG worked extensively with the Exercise team to develop a credible and challenging incident scenario and were also present during the workshop itself both to provide expertise to the workshop and ensure that a realistic and robust discussion on interdependency issues took place.

Garth Graham

Chair of Electricity Task Group

Case Study: Ensuring resilience for the Tour de France

Ensuring a safe and secure power network to support the Tour de France was a key priority for electricity distribution company Northern Powergrid.

Behind the scenes the company, which owns and manages the network that provides electricity across the North East, Yorkshire and northern Lincolnshire, embarked on a major planning campaign to ensure it was ready to support the world famous annual sporting event.

Working with the race organisers, local and national agency partners, months in advance of the prestigious race, Northern Powergrid delivered a strategy that ensured the network was well-maintained and ready to support the event and an experienced team was on stand-by to respond quickly to any network incidents that could potentially impact on the Tour.

From the opening ceremony, and across the weekend, the company had a dedicated team of more than 260 ready to respond. It deployed staff, generators and customer support vehicles across key locations in readiness and had a helicopter on standby so it could mobilise quickly to locations challenging to access due to road closures and crowds. The helicopter was also used to check overhead lines along the race route for any potential safety infringements where temporary campsites had been set-up.

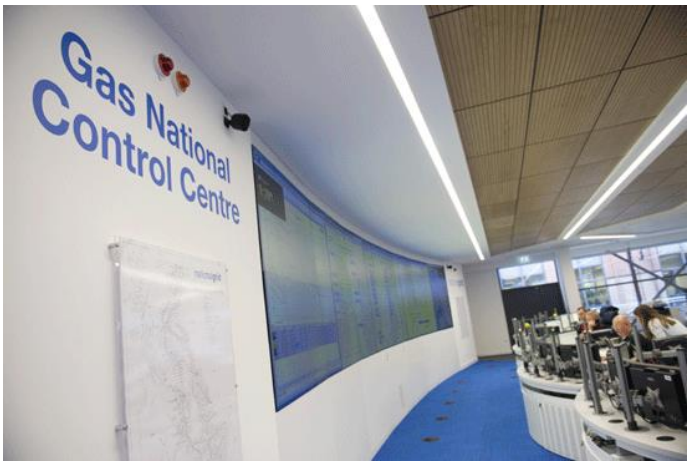
Understanding the importance and the scale of the event, which draws global attention, Northern Powergrid set up Area Management Centres at strategic sites near the race route to monitor network performance. It also ensured its major incident command structure was in place in its North East operational base and the company's Yorkshire control centre, dispatch team and customer contact centre were strengthened with more staff ready to respond.

During the event Northern Powergrid's plans were put to the test when an electricity cable in Haworth faulted on the Saturday evening of the race. The Northern Powergrid team moved swiftly into action working through the night to repair the fault and fully restore power. By 7am Sunday morning the road was resurfaced, the race organisers were reassured, and the race continued with Tour cyclists using the route later that morning unaware of what had happened below their wheels earlier that day.

The incident, while intense for those involved at the time, demonstrated the resilience and importance of Northern Powergrid's planning - and the business' ability to support high profile events taking place in the region it serves.

Gas Task Group

The role of the Gas Task Group (GTG) is to ensure continuous improvement in the UK's gas safety regime and identify emerging opportunities to improve procedures and processes; that proposals for improvement are developed and gas emergency procedures are monitored and that any proposed changes are compliant with current legislation, regulation and codes; that any proposed changes mitigate societal and business risk, and increase energy resilience. The Group also ensures that lessons learnt from incidents and national safety exercises are fed into the National Emergency Plan for Downstream Gas and Electricity.



The GTG has undertaken a number of key pieces of work over the last twelve months, including a comprehensive response to the DECC severe weather resilience review. Gas Distribution Networks (GDNs) primary focus is on the prevention of a supply emergency occurring. This is due to safety considerations and since gas supplies cannot be quickly reinstated following a loss of supply. Therefore, the network is designed to meet maximum demands and also to remain resilient during a 1 in 20 winter.

The GTG reviewed GDNs preparedness for severe weather and are satisfied that their processes, procedures, systems, people and plant needs have been reviewed and found fit for purpose.

This year the GTG also reviewed the GDNs the Strategic Spares arrangements to mitigate the risks to the GB Gas Transportation Infrastructure[1]. This piece of work:

- Outlines the failure scenarios for which strategic spares are provided as well as the arrangements for holding and accessing the spares. It also describes the provisions for accessing specialist equipment such as high pressure flow stopping and the arrangements for mobilising specialist service providers.
- Described the arrangements for ensuring adequate strategic spares are available to the downstream GB gas industry in the event of loss of part of the network.

Another continued activity the GTG has undertaken is its research and modelling into the effect of Electricity Rota Load Disconnection on gas consumption. The group has undertaken a series of modelling exercises and is now working with the HSE, DECC and National Grid Transmission, to further understand this interdependency.

[1] Refers to strategic spares required to repair the National Transmission System (NTS) and/or the Distribution Network's transmission systems (also known as the Local Transmission System – LTS or DN HP Networks). This includes those networks owned and operated by National Grid Gas, Southern Gas Networks, Scotland Gas Networks, Northern Gas Networks and Wales & West Utilities. It does not include distribution networks operating at below 7bar.

The GTG has also kept an on-going, watchful eye on the gas quality issues that are developing across the UK and Europe.

In the coming year the GTG will be involved in supporting DECC in a review of the National Emergency Plan for Downstream Gas and Electricity. We will continue to be involved in planning and execution of the national safety exercises and ensure that any lessons learnt are fed back into the NEP.

Chris Bielby

Chair of Gas Task Group

Communications Task Group

The past 12 months have been the most significant for energy resilience in many decades and significant activity has taken place as part of the Communications Task Group (CTG) since the winter 2013/14 storms. ENA represents and promotes the transmission and distribution network operators for gas and electricity in the UK and Ireland and works closely with CTG to improve the communications between Industry and customers.

The St Jude's storm in October marked the start of what was the most challenging winter for the electricity networks in recent memory.

Companies were dealing with the operational and technical aspects of repairs and managing the level of faults on the system, but also on their communications too. Communications, especially with customers was highlighted as an area needing further work and was the focus of many of the actions set out in DECC's Severe Weather – Christmas 2013 review, published in March 2014.

The CTG tasked the Energy Networks Association (ENA) with delivering on a number of these actions relating to communications planning, sharing best practice and ensuring a greater awareness of the networks amongst consumers. While there were lessons to be learnt from the winter period, and there will continue to be a number of on-going areas of focus for the network operators, a significant amount of work has been carried out over the last few months to help ensure future storm incidents can be handled more effectively.

Social Media

The DECC review identified the use of social media as an area of increasing importance that required further focus from companies as to how they used it to provide information to customers and respond to their queries during high demand of an incident.

To help facilitate this, CTG and ENA held a workshop with members to discuss best practice and used external facilitators to assess the approaches taken by companies. As a result a good practice guide has been agreed and companies are stress testing these provisions and adopting them into their own action plans.

The nature of social media means that there will continue to be a volume of activity at which companies will struggle to respond directly to every customer, however, companies action plans will set out the mechanisms for dealing with issues that arise and providing the necessary information, as well as directing customers to the relevant sources of up to date information.

Single Emergency Number

It became apparent during the winter storms that many customers did not know who to contact in the event of a power cut and the level of awareness about DNOs was relatively low. ENA has set up a Project Board with a number of sub-groups to deliver a single emergency number, ideally in the form of a three-digit number, which customers can use to contact their local network operator to report the outage and find out latest information on repair efforts.

The Project Board has prepared various project documents, including the initial stages of publishing tender documentation for provision of the service. ENA has also written to Ofcom setting out the desire for a three-digit number as part of the process of applying for approval for one to be allocated.

CTG and the Project Board will consider and prepare a comprehensive communications plan for promoting the single number once approved and this will also be used as an opportunity to raise awareness of the role of the distribution network operators.

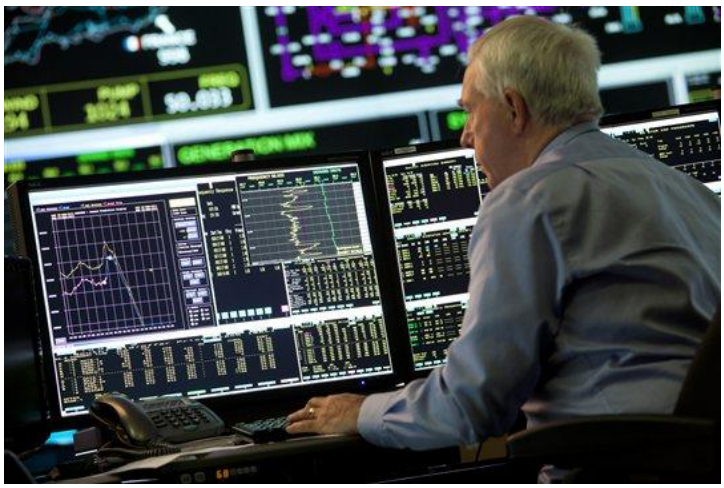
Other notable work CTG has progressed this year includes agreement on communications and messaging for use during national electricity or gas emergency situations and collaborating with ETG to produce a Good Practice Guide that sets minimum standards for the provision of supply restoration information to network customers during emergency events.

David Smith

Chair of Communication Task Group

Cyber Security Task Group

The Cyber Security task group started over three years ago as an information sharing roundtable of the most senior information security professionals across the UK electricity and gas generation, transmission and distribution operators. More recently, government participation was invited from DECC, CPNI and Ofgem and the group became an official sub-task workgroup of E3C. Other government departments such as the Cabinet Office's Office of Cybersecurity and Information Assurance (OCSIA) and the Department for Business, Innovation & Skills are often invited to provide briefings including on emerging EU legislation.



Through individual membership of the new Cyber Security Information Sharing Partnership (CiSP) and other communications, the group continues to share alerts and information on security incidents that are of help to others in the sector. Other cross-sector topics of interest have included: the security of cloud computing, best practices in security awareness, mobile device security and the adoption of security standards.

This year the group took a significant step forward and successfully conducted a collective risk assessment of cybersecurity risk across GB critical infrastructure in the Energy Sector, supported by DECC and GCHQ/CESG. This GB-wide risk assessment articulates the likelihood of threats, the status of mitigating controls and, collectively, the holistic GB cyber security risk to the delivery of a secure and resilient gas and electricity infrastructure. A national energy sector cybersecurity risk assessment of this scale and level of collaboration is almost unheard of and we should be rightly proud that this has been achieved in the UK.

The results of the risk assessment were generally positive with recognition that there were both opportunities to share best practices across companies as well as some emerging security challenges which the sector could best work on together. This has resulted in a work programme in collaboration with DECC, CPNI and other government departments that particularly focuses on the security management of operational technologies and the security of the products and services of key suppliers to the sector.

We have recently agreed to further extend the expertise of the membership by inviting representatives from GCHQ/CESG and the new CERT-UK.

Graham Wright

Chair of Cyber Security Task Group

Security Task Group

The main work of the Security Task Group (STG) is to deliver protection of the UK energy infrastructure through a collaborative framework of both industry and government departments. This ensures the successful identification and management of a variety of threats and risks, reducing and mitigating negative impact to the sector and its customers.

Terrorism

All relevant controls to prepare for and counter broad and specific threats from terrorism are embedded in both the E3C STG and individual companies business as usual processes, including, internal processes for monitoring, response and escalation. Regular updates are discussed at STG meetings by both individual representatives and also CPNI representation on the STG.

All members have direct access to a CPNI advisor; Physical, Personnel and Cyber, as well as Police nationally and locally with the Counter Terrorism Security Advisors (CTSAs).

On the ground support at a local regional liaison level is undertaken via direct access by all STG members to the relevant CTSA's and access to op Argus exercises.

DECC have provided guidance on personnel security with individual companies conducting risk assessment against job roles.

Energy Theft

There has been a renewed focus on the risks and response to energy theft this year to ensure individual companies and the sector are responding effectively to counter the issues and reducing the impact on customers.

Various pilot schemes on energy theft are being run by individual companies – CrimeStoppers, TV programs, throughout 2014 with a view that critical success factors will be discussed at year end to enable wider sector activity and collaboration and link this in to the strategic work plan for 2015.

STG representatives are members of the Home Office Working group – cannabis cultivation, and have been instrumental in national and regional campaigns including the "Scratch and Sniff" campaign re- launched in June 2014.

Impact of Organised Crime

Links in to the National Crime Agency (NCA) via the National Business Crime Forum has been established following the removal of the old SOCA industry liaison group. A joint work shop was attended by a number of the STG members where interaction was high and a realisation that greater interaction was required by all parties.

The STG are currently obtaining a threat assessment from the NCA / Police on the impact of organised crime against the energy sector to ensure that we are all working collaboratively and that all information is up-to-date and validated with real case history.

The STG is also linking in with UKPIA who are also trying to establish NCA on-going links for threats to the pine line infrastructure.

Single Issue Activism and Direct Action Groups

The Analysts Working Group of STG interfaces with all companies is working well with enhanced information sharing in real time proving to be valuable and enabling companies to be more proactive in countering threats as they materialise.

NDEDIU and the Police are members of the STG quarterly meetings providing regular briefings and interfaces with individual companies depending on risk.

There continues to be real threats to the sector from various groups and although there has been a greater focus on Shale Gas protests recent actions undertaken against coal assets demonstrate that this area continues to be of interest of direct action groups.

Regular briefing sessions are undertaken both on an ad hoc basis, as a response to events, and also quarterly in pre organised meetings.

Metal Theft

Instances of metal theft are low in comparison to recent years. Implementation of effective mitigation measures such as the amendments to the scrap metal dealer's act and also the low price of scrap has been a defining factor in 2014. There has however been a small but significant spike in incidents in Scotland where changes to the relevant legislation are yet to follow.

A database update has been undertaken and has enabled enhanced bulk uploading, simplifying time and effort for individual companies. This has also enabled support to Ofgem reporting alongside original purpose.

There continues to be an increase in enhanced information sharing across industry through the AWG and on a bilateral basis across a diverse threat vector. There is a notable shift to lower voltage environment for theft of copper where risk of detection is lower.

The E3C STG is planning to include the Independent Gas Distribution companies into this work plan for 2015.

Personnel Security

There has been a renewed focus on Personnel Security risk identification and management, this is conducted on a company by company basis and linked to key activities with specific focus on CNI assets.

Members of the STG have been involved in a CPNI pilot employee awareness program during 2014, the findings and output from this pilot to be shared with the STG.

The STG continues to link in with DECC and CPNI initiatives to ensure there is a more consolidated approach, a more enhanced work plan for this area is being developed to be rolled out in 2015.

Barrie Millet

Chair of Security Task Group

Pandemic Steering Group

The role of the Pandemic Steering Group is to ensure that the GB energy sector is prepared for and mindful of a possible pandemic disease event. The group was established some five years ago; however, it was placed in abeyance by E3C three years ago having completed a number of key deliverables.

As noted last year, there was a request from E3 to re-constitute the PSG and, in particular, its three sub-groups dealing with; (i) Operational matters (ii) HR matters and (iii) Retail matters; so that the previous work could be reviewed, and if appropriate, refreshed. This has formed the bulk of the work of the groups this year.

The Operational sub group reviewed the 'Commodities Report' mechanism that it established previously; this allows power stations to report to DECC, via National Grid, on their likely running over a short term period, based on the availability of certain key commodities etc.

An exercise was undertaken in the summer of 2014 to test the completion / submission of Commodities Reports by the major power stations. This along with an exercise of testing the submission of the combined Commodities Report based information from National Grid to DECC (also undertaken over the summer) was designed to support DECC in its participation in the upcoming major Government pandemic exercise.

The Retail group is re-examining the work previously done on customer site visit prioritisation to ensure that it remains fit for purpose.

Garth Graham

Chair of Pandemic Steering Group

Annex A: Background to the Energy Emergencies Executive (E3) and its Committee (E3C)

The Energy Emergencies Executive (E3) and its Committee (E3C) are the principal fora for identifying the processes and actions necessary to prevent and handle emergencies affecting the supply of gas and/or electricity to consumers in GB. They are key bodies for the Devolved Administrations, industry, regulators, and the UK Government to work together in building the resilience of energy supplies. The Terms of Reference for both bodies are approved by the Minister for Energy in the Department of Energy and Climate Change (DECC).

E3 is tasked with providing assurance to the Minister for Energy that adequate pan-industry and government emergency planning arrangements are in place and all participants are suitably trained and exercised. E3 sets the strategic direction for E3C and oversees its work. E3 is chaired by a DECC Director with other members being an Ofgem Senior Partner, together with the Chair and Deputy Chair of E3C.

The role of the Committee is to provide the primary working interface between the UK Government, the Devolved Administrations, regulators and industry with regard to all aspects of emergency planning and emergency arrangements relating to the supply of gas and/or electricity to consumers in GB. E3C reports to E3 and is the main forum for delivering the work programme, principally through a number of task groups, which currently comprise:

- Electricity Task Group
- Gas Task Group
- Cyber Security Task
- Security Task Group
- Communications Task Group
- Pandemic Steering Group

E3C is currently chaired by National Grid's Group Director; Safety, Sustainability and Resilience, with members drawn from: DECC, National Grid, distribution companies, Ofgem, HSE, the Gas Industry Safety Group, Oil & Gas UK, ENA, Energy UK, Independent gas network operators, Civil Contingencies Secretariat, Scottish Executive, Welsh Government, Consumer Futures, LNG Terminal Operators and other key industry stakeholders.

E3 and E3C have no legal or formal financial arrangements. Its members undertake duties on a voluntary basis, and the administrative costs of meetings etc. have so far been met by National Grid and DECC. It is not the role of E3C to sanction expenditure. Where significant costs are likely to be incurred, the funding arrangements are finalised elsewhere, for example during the Price Control Reviews for those companies that are price regulated. Therefore, the analysis undertaken by E3C should always reflect the costs and benefits of a particular course of action. E3C assumes that companies and/or regulators will use the analysis in their own business cases for the expenditure.

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