

# HISTELEC NEWS

NEWSLETTER OF THE SOUTH WESTERN ELECTRICITY HISTORICAL SOCIETY

Web Site : [www.swehs.co.uk](http://www.swehs.co.uk)

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## SEASONS GREETINGS

### SWEHS WEBSITE UPDATE

Members will be aware that the Society website at [swehs.co.uk](http://swehs.co.uk) has not been updated since the sad death of Marcus Palmen. Paul Hulbert has now managed to "crack the code" and carry out some updates, including the Programme of Events. Paul has recently made good progress towards a modern replacement website, which is available now on [paulhulbert.org/swehs](http://paulhulbert.org/swehs). He would welcome your feedback about this prototype - there's a feedback form on the menu.

### ELECTRICITY COSTS CRIPPLE INDUSTRY

Green Energy taxes are causing manufacturers' costs to surge making them unprofitable compared with the competition in Europe. This applies to the Steel Industry, where the German manufacturers have been shielded from carbon taxes and green energy schemes dramatically reducing their power bills. A group representing UK manufacturers in the energy sector called the Energy Intensive Users Group have stated, if the Government energy policies continue, wholesale electricity prices will double over the next decade.

### UNDERSEA GRID CONNECTIONS

With so many large coal-fired power stations closing, it is no wonder that National Grid are looking to shore up their supplies from other sources. The Viking Link is a planned 400 mile EHV cable connection with Denmark, capacity 1400 megawatts. It is known that Denmark has a surplus wind-powered energy when the wind is blowing, so let's hope that Denmark's wind isn't blowing at the same time as the UK's wind in order to get maximum benefits all round! Another 450 mile link is being planned to Norway, which has much more going for it, in as much as Norway has surplus hydropower. The only snag is that it is not anticipated to be completed until 2021!

At the end of October, David Cameron visited Reykjavik, Iceland's capital and included in the discussions was the idea of installing a cable between Iceland and the UK. Iceland's volcanoes could be supplying power to British homes in the future!!

### GWR ENCORE

When the South West line has been electrified, First Great Western intends to change their name to GWR in tribute to Brunel, who originally built the line.

### AMBER WARNING

Ms Amber Rudd, Energy Secretary, has called for the shutdown of all the remaining 12 of Britain's coal-fired power stations by 2025 to be replaced by a new fleet of gas-fired stations. At the moment the coal-fired power stations provide one third of UK electricity and are scheduled to close under EU emission rules.

### ENERGY CRISIS

At the beginning of November, with two power stations temporarily out of commission, there was inadequate wind to support the National Grid's power network. The headline was "Power Reserves Gone with the Wind". NG had to import 200 megawatts from Ireland at £276 per megawatt hour, about seven times the wholesale price of electricity during mild weather. A Times leading article by Matt Ridley demanded a Government U-Turn on energy policy before something serious happens and to stem the rise in electricity subsidies. He suggests speeding up the programme of installing more efficient combined cycle gas-fired stations to replace coal-fired stations.

Logannet PS in Scotland, the second largest power station in Britain is set to close and the Scots are not very pleased with HM Government's policy. Scottish Power, the owner of the 46 year old coal-fired power station are being forced to close it down due to a "discriminatory transmission charging system that penalises Scottish electricity generators in comparison to those in the south of England". It pays significant higher transmission fees because it is situated hundreds of miles from the biggest population centres in England. Lonannet is second only to Drax!!

Also in the news is the closure of another big power station in England of Eggborough in North Yorkshire with the loss of 240 jobs and its output. This time it is the age of the plant 53years, but nevertheless it represents a loss of 4% of UK's electricity. This is serious we need to be prepared for the black-outs?  
(See **Energy Crisis2** for members comments page 2)

### KING COAL

Despite the steady growth of renewable energy in Europe in particular, coal is still the highest provider of electricity at 40% worldwide. The World Coal Association has called for more investment in clean coal technology.

## ENERGY CRISIS 2

**James Scott** has been reading a very interesting book called *The Burning Answer* by Keith Barnham. He points out that those countries that lost the Second World War have pursued solar energy much more than the countries that won. He says that with the new efficient solar panels under development on typical homes, it will be possible to use solar energy to fuel a car for 10,000 miles per year. He also suggests that nuclear energy is not the way ahead for the long term.

The first UK nuclear reactor at Calder Hall was really built to produce plutonium for defence purposes. This was not actually acknowledged until 1986. As a result the UK has fallen far behind Germany and Italy in the development of solar technology but has a stockpile of over 100 tonnes of separated plutonium, see page 92 of the book. Modern solar panels in development are three times more efficient than the ones currently available. I have had solar panels for over five years. In the summer I can generate 15 units a day. Today I generated 3 units.

In the short term I suspect the energy crisis is caused by the need to meet the national carbon emissions targets by closing down coal fired power stations and by nuclear stations getting to the end of their operating life. There has been no joined up thinking by any government for the past 15 years or so.

**Graham Warburton** thinks that re-nationalising the ESI would be an answer and his keenness for the modern tram is illustrated by one he saw in Istanbul recently. He says "such an animal should be plying between Bristol and Portishead and other suburbs of Bristol".



**Trams at Istanbul by Graham Warburton**

## TESLA MOTORS LATEST

Tesla is really going to be vast enterprise!! They are building a large battery factory which they call a Gigafactory in Sparks, Nevada –appropriate place name! They are also seeking deals with mining companies in both Nevada and Mexico to mine Lithium to ensure a supply chain for the factory. The factory name comes from the large planned output of 35 Gigawatt-hours of batteries.

## FRENCH EMBASSY IS GREEN!!

At the recent signing of the agreement with EDF to build the Hinkley Point Nuclear Power Station, the French Ambassador was reported to have boasted that the Embassy is very "green" since they had switched from EDF to Ecotricity, the so-called provider of 100% renewable energy. Somebody needs to tell him that it is impractical from a network perspective.

## COLLECTABLES WITH DIFFERENCE

On a sunny afternoon in mid-September 16 members gathered at Cairns Road, having tucked in to a plentiful buffet lunch at the Westbury Park Tavern. Our speaker, John Bates, opened his talk with a brief life history explaining how he came to develop an interest in 'collectables'. John had worked for many years at the Vauxhall plant in Luton before being asked to transfer to Bristol to a new job on marketing and sales. In Bristol during the course of walking a newly acquired dog around the streets of central Bristol, his wife became attracted to the large number of antique shops then present in the city centre and started to buy items of interest. Not to be outdone, John soon joined her in this habit and over the years has amassed a large collection of curios and objects d'arte, through visits to antique shops and shows, as well as to car boot sales, both to buy and sell. John said he spends a lot of time researching his acquisitions to find out their user and how they worked.

That day John had brought along for display a wide selection of items as well as giving a slide show illustrating some of his collection. He commenced proceedings by displaying a small hand-held round container. None of us could identify what it was but everything soon became clear when a button was pressed and a tie shot out into the room – it was a portable tie press! – perhaps not so relevant to us retirees, wearing our open neck shirts.

John kept us guessing on a miscellany of items, many of which were ingenious in their design and had served useful practical purposes in their day. For race-goers, there was a pair of imitation binoculars with a hidden purpose to store a quantity of the 'hard stuff' so that the owner could partake of a quick tot whilst watching the horse racing. Then there were several examples of razor blade sharpeners, harking back to the days of pre-electric razors, and a pair of tweezers which incorporated a small light, enabling their use in the dark. One ingenious item was a ring cutter, to facilitate removal of a finger ring, hopefully without cutting the finger!

All too soon the afternoon had gone and following a vote of thanks and a cup of tea everyone went on their way, some possibly to search their local antique shops for similar items of interest. For such an interesting afternoon it was disappointing that the number attending had been so low, which is not much encouragement to your committee who try to plan a varied programme.

**Chris Buck**

## JOHN DIKE'S COUNTRY FILE

This was an October day-out in the country with John and Jo Dike. Members and guests assembled at the Waie Inn at Zeal Monachorum for morning coffee and biscuits during which time we ordered our lunch from the extensive menu. John ran through the day's activities and after an excellent lunch we drove the short distance to Coldridge, where some of us went on to view the Coldridge Collection of tractors and equipment at Lower Park Farm. The remainder of our group headed to the Village Hall for a demonstration of autumn decorative wreath making.

The Coldridge Collection of tractors and equipment is owned by Michael Thorne, a Ferguson tractor enthusiast and a SWEHS member. Mike outlined his background and introduced us to his private Collection dedicated to an extensive range of Ferguson and Massey Ferguson tractors and agricultural equipment including the history of Harry Ferguson and his Company. Mike was born in London and after leaving school went to work on a farm in Oxfordshire where he had his first experience of Ferguson tractors. Later he changed career, moving to Devon and into engineering and construction. In 1985 he purchased a Ferguson tractor for £100 and that set him on his quest to build up a collection that now also includes some items on loan. The 'Ferguson System' developed from around 1916 linked a tractor and plough as a complete unit and Harry Ferguson subsequently developed the three-point linkage with hydraulic control including a safety feature to prevent rear roll over by tractors, a common occurrence at the time. Many of his design ideas were later adopted by tractor manufacturers worldwide. The tractor models on show were developed for a range of farming and horticultural uses often with special wheel arrangements. All the exhibits are well described and in addition, there is a collection of scale model Ferguson tractors, railway locomotives, tube trains, buses and other memorabilia.



Mike Thorne on his Ferguson Tractor

John gave an interesting presentation on the history and unique features of the Grade 1 listed village church of St Matthew's. We then had the opportunity to look around the church with its fine carved wooden screens and pulpit dated from around the 15<sup>th</sup> century. The village of Coldridge was mentioned in the Domesday Book and is believed to date back to Norman times and beyond. For those not visiting the Coldridge Collection; in the Village Hall, Lyn Green demonstrated autumn decorative wreath making with time for members and guests to make their own.

After the visits and wreath making events had concluded, we all met together at the Village Hall for a film show presented by John on farming in times gone by. This gave an interesting view of how labour intensive country life was and in the hard work involved in bringing food to the marketplace. To bring the day to a close the 35 members and guests were served with a fine cream tea organised by Jo who also baked the scones. It was a tasty end to an interesting and varied day. Our thanks go to John and Jo, Michael and Lyn and all the other helpers from the village. A donation from the cream teas was made to Devon Air Ambulance and from the Coldridge Collection visit to the North Devon Hospice.

*David Cousins*

## POST CARDS AT CAIRNS ROAD

Mike Britton, recently joined member, gave us a fascinating talk at Cairns Road in November entitled "Let's Send a Postcard", which covered the history of the Postcard. He included many pictures of Bristol's past and elsewhere, highlighting the changes that have taken place by included recently taken pictures of the scenes. He ended his presentation with some saucy ones to fetch a smile and ones which illustrated the changing culture of the past century. Before the talk, the 27 members and friends met for a social lunch at the Westbury Park Tavern, where unfortunately our past Chairman Roger Hughes fell down injuring himself and being shipped off to hospital! Poor Roger.

## NEW OFF-SHORE WINDFARM

The German group RWE Innogy has found financial backers for a new windfarm off the Suffolk coast, called the Galloper Project. It was a 50:50 £1.5billion project with SSE, but the latter recently pulled out. The backers are the state-owned Green Investment Bank, Siemens Financial Services, Macquarie Capital and the European Investment Bank. Galloper is 17 miles off the Suffolk coast and is expected to come into service by March 2018. Siemens will supply 56 of its 6MW turbines.

## MILTON KEYNES BUSES

WPD are involved in an all-electric bus pioneering project in Milton Keynes. They are in the process of setting up three wireless charging points around the bus network, so that a 10 minute charge can be sufficient to power a bus for one hour. The nationally financed scheme involves 8 buses each powered by 160kWh Lithium ion batteries.

## ORIGIN OF THE SAFETY RULES

Recently I received an enquiry concerning the origin of the Electricity Supply Industry (ESI) Safety Rules. A few years before privatisation, a revised 4<sup>th</sup> edition of the National Distribution Safety Rules had been issued in 1985. These National Rules served as the basis for the production of each Area Board's Safety Rules, with tweeking as appropriate to suit the individual preferences of each and badged accordingly, hence the SWEB Distribution Safety Rules. However in the case of the MEB they adopted the principles of the CEGB Rules (one Board had to be different but that is another story!).

The fact that these were the 4<sup>th</sup> edition indicated that their origin lay many years in the past but how far back? Logic told me that Safety Rules had probably existed in some form or another in the electricity supply companies and municipal electrical undertakings prior to nationalisation in 1948, on which the ESI National Rules no doubt had been originally based.

Then, coincidentally, whilst searching our archives for further information I came across two sets of Rules supporting this theory. The first had been produced by Edmundsons Electricity Corporation for their group of companies, which included the Cornwall Electric Power Co and the Ilfracombe Electric Light and Power Co; the second related to the City of Plymouth Electricity Undertaking. Perhaps not unsurprisingly, the Edmundsons Rules bear most resemblance to our modern day Safety Rules, using similar terminology such as Competent and Authorised Persons, Permits to Work and Danger/Caution Notices. The City of Plymouth's Rules related only to high voltage equipment and were primarily concerned with interfacing with the Central Electricity Board (CEB) at Prince Rock Power Station as well as with the Dockyard network and bulk supply arrangements for the Plympton undertaking.

Finally, in a personal reference source I found the following statement : "the CEB were known to have had Safety Rules from 1931 which formed the basis for the ESI Safety Rules for decades to come". This is understandable since by then the initial 132kV grid system was up and running. However, what form they took I can only surmise. If anyone has any further information to add on this subject I would be pleased to know about it.

*Chris Buck*

## DIRTY BRITISH COAL

A new EU instruction called the Industrial Emissions Directive has been issued to be operative from 1<sup>st</sup> January. Basically British coal-fired Power Stations will be asked to shun locally mined coal with a high sulphur and nitrogen content. It means that mountains of coal will become unusable and coal from Columbia and Kazakhstan will have to be imported to keep them going. The British Coal will have to be exported to countries outside the EU. This whole dilemma seems ridiculous!

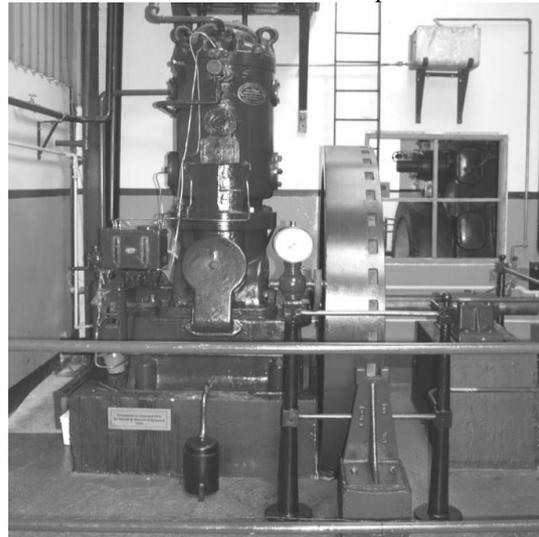
## ST. AUSTELL HISTORY

Just over a year ago some kind soul deposited at Cairns Road a disc (CDR) with the title "SWEHS – St. Austell Disks" and we have only just got around to looking at it. There are about 40 photos on it some of which came from our archive but also there is considerable amount of written material about St. Austell and District Light and Power Co. Ltd. Somebody has done an immense amount of work to retrieve this material and we would like to know who he or she is? If you have an idea, please pass to the Editor.

## WELSH POWER MUSEUM

### Portishead Minus A!!

On a visit to a relative in North Wales in August, we decided to travel via the West Coast of Wales including Aberystwyth and also visit the Internal Fire Museum of Power near Aberaeron. When I mentioned my special interest, the ex-SWEB Pocket Power Station with the Proteus Engine from Princetown, the owner Paul Evans was immediately keen to show me another piece of electrical history from the South West. The engine came from the Portishead generating station set up by Christy Brothers in 1913, pre-dating the Portishead "A" Power Station. Frank Christy set up the station at Gas Lane with two Petter 50HP engines for the Clevedon & District Electric Supply Company, later the North Somerset Company. (The building is still there). When the 11kV supply was brought in by cable from Bower Ashton, they were redundant and sold with one ending up at Minions Quarry, Bodmin Moor in Cornwall from which it was recovered by Petters of Yeovil and then ended up in Wales.



**Petter Engine & Dynamo ex-Portishead**

For those interested in engineering, a visit to this remote museum location is a "must". There are 180 oil and diesel engines on display in 8 halls and the proprietor has just acquired a Bellis & Morcom steam engine and is to build further accommodation for it, a Steam Hall. Some of the names of the manufacturers may be of interest other than Petter. There are many WH Allen engines, Blackstone, Ruston, Tangye and Lister to whet your appetite.

Website: [www.internalfire.com](http://www.internalfire.com)

*Peter Lamb*

## CRUISING WITH FRED OLSEN

June and I have been cruising with the Fred Olsen Line for some time. The line has four ships Balmoral, Black Watch, Boudicca, and the Braemar and each take about 800 passengers with a crew of about 350. The ships depart from various U.K ports including Falmouth, Southampton, Dover and Avonmouth, Bristol with a multitude of destinations world-wide. Departures from Avonmouth are of particular interest to us as we live only about half an hour away at Clevedon. There is no class system, so all passengers enjoy the same amenities. Our latest cruise, September 2015, was on the Black Watch from Avonmouth to Madeira, La Palma, Tenerife, Lanzarote and Lisbon lasting 12 days. When at these places a variety of trips ashore by coach are on offer. We chose those without too much walking! Two trips are worth mentioning, one began with a long coach ride to join a small boat called Mondragons Dream to view a volcanic island. All these islands are volcanic in fact. We anchored for a Spanish type lunch prepared by the Skipper, which was excellent. This boat was owned by a young couple who gave up their jobs ashore to live on board and sell these trips to the cruise trade. The other trip of note was to visit Lisbon on the way home; a view from the river by a small boat was followed by a tour around the city. Lisbon is a superb city of great commercial and cultural importance.

Black Watch was built by Warsila Helsinki Shipyard, Finland in 1972. She was first named Royal Viking Star after her first owners. In 1996 she was purchased by Fred.Olsen Cruise Lines and named Black Watch. In 2005 she was extensively re-fitted with a new propulsion system with four MAN/B&W 3500KW. Diesel Engines and gear units by the German firm Blom &Voss and also new generating sets. Measures were taken to reduce noise and vibration.

The bulbous bow stops water running up the stem thereby reducing the wave resistance, this type of bow is very common on both passenger and cargo ships. The bow and stern thrusters are used when docking and the propellers are variable pitch set in line with the two rudders. Stabilisers are used to reduce the roll in rough weather, they tilt to follow the motion of the ship and are retracted when alongside. Propulsion is by four MAN diesels, two to each propeller totalling 14,000 KW, which run at 750 rpm through step down gear units to the props. Maximum speed 22 knts (25 mph).

*Mike Hield*

## BATTERY TRAINS

Bombadier is working on the idea of a battery driven train, which could run on branch lines, where the cost of electrifying the track would be prohibitive. A prototype has already been running on test track at Derby, but the main research is being undertaken at their plant at Mannheim in Germany. To date it has been found that a train can travel up to 77km on a full charge.

## WOODS ELECTRIC CAR

A 1905 Woods electric car was put up for auction by Bonhams in August for about £60,000. It was made in Chicago and was called the Woods Electric Queen Victoria Brougham. It had two motors driven from a 40 cell battery giving an output of 2.5HP and could reach a speed of 18mph: quite a speed in those days. Woods were only in business from 1899 to 1915.



## WHO HAS PRIORITY ON BRITISH ROADS?

An interesting question and the answer revealed when I did a "Speed Awareness" course back in July. It was an excellent course and I would recommend anyone to do it. The snag is, you do have to be nicked for speeding (38mph in a 30 zone going downhill out of Chepstow on the A466) and it costs £80. However, it does save having 3 points on your driving licence and having to tell your insurance company. As the offence was committed in Wales the letter from Gwent Police was headed "Hysbsiad O Fwriad I Erlyn", but an English translation was also enclosed.

There were no recriminations by the course leaders and the topics covered concentration, observation, anticipation, allowing space, time and recognising speed limits. So, what was the answer to the question? It is pedestrians and that's why we don't have "Jay Walkers" in the UK.

*David Hutton*

## GRID BATTERY SYSTEMS

In the August edition we reported about a large battery installation on the system in the North East 2.9MW storage capacity 5.7MWh. Now a much larger one is being connected at Leighton Buzzard by UK Power Networks consisting of 3000 lithium-ion batteries costing £18.7m, which will enable 10MWh of storage. The units are built by S&C Electric and Samsung SDI and Younicos. The idea is to store wind and solar energy at times of generation surplus. A major part of the funding has come from Ofgem's Low Carbon Networks Fund. These are experimental systems in the UK, but in the USA they are going for even larger units. Southern California Edison awarded a contract to AES to build a 100MW Alamos Array near Long Beach, California using Lithium-iron Phosphate batteries.

## INDIANS WITHOUT ELECTRICITY

With the President of India visiting the UK in November, I was astonished to read an article knocking his achievements, particularly as the Country is still lacking in motorways and there are still 200million households without electricity. That is surely a shockingly high figure!

## GRAPHENE INSTITUTE

A new building is gracing Manchester on the edge of the Manchester University campus. It is the National Graphene Institute. The University has spent £61 million on establishing this new facility in order to retain its role at the heart of research into this new material, an extract from graphite, which has been described as the substance that could change the World!!

Graphene was discovered by two Manchester based scientists, Prof. Andre Geim and Prof. Kostya Novoselov, who were awarded the Nobel Prize for their research in 2010. The substance is atom-thick layer of carbon which conducts electricity better than copper. It is 200 times stronger and six times lighter than steel and it is almost perfectly transparent, which is quite extraordinary! It is not surprising that last year 2,500 graphene related patents were filed around the World. Incidentally both scientists are naturalised Brits who were born in Russia and have been knighted.

## MEMBERS NEWS

**John Gale** – John is moving house from Backwell to a flat at Worle, Weston-super-Mare. We wish him well in his new environment.

**Peter Lamb** Peter gave a talk in October to the Institute of Engineering & Technology at Exeter at Exeter University, “Early Supplies of Electricity in the SW”. Unfortunately only ten turned up which was disappointing as he was supported by both David Hole and John Dike.

**Ted Luscombe** – Ted is giving his talk about “Early History of Plymouth’s Electricity” at Plymouth University to the Institute of Engineering & Technology on 8<sup>th</sup> March 2016. All are welcome so I guess he needs your support!!

**Eric Edmonds** - While John Haynes and his wife Ellie were staying in Falmouth for a few days during September, they visited Eric Edmonds and his wife Rosemary. Incidentally, Ellie knew Rosemary as members of the local WI when the Haynes lived in the Falmouth area. Eric, now in his late 90’s is our oldest member. As many of us know, he is an expert on the early years of Electricity in Cornwall. The Haynes found him in good spirits and keenly watching the Rugby World Cup on TV. He was for many years very much involved with Redruth Rugby Club.

## THE LAST LAUGH!

In September WPD had a serious break-in to the adjacent compound to our Archive & Museum at Cairns Road, Bristol with the thieves stealing £30,000 of contractor’s equipment. Consequently high security locks were applied to both gates including the one we

use, preventing our access until new keys were cut for us. On our September open day, arrangements were made to open up and many of us arrived anticipating someone coming to let us in. Nothing happened, so five of us climbed over the outer railings. At 11.00am a super intelligent gent with considerable savvy arrived (our Chairman, David Hutton) and slid back the bar (the high security lock had been put on the other end of the sliding bar) and nonchalantly walked in addressing five red faced members.

## FEARSOME ELECTRIC

When I was young, I was afraid of the dark, now when I receive my electric bill, I am afraid of the Light!

Why did the teacher decide to become an electrician?  
To get a bit of light relief!

Why was the free electron so sad?  
He had nothing to be positive about!



Merry Christmas

## FOR YOUR DIARIES – COMING EVENTS

**Sat. 30th Jan. WINTER LUNCHEON AT THE DEVON HOTEL, EXETER** - Followed by a talk by Geoff Bell (of BBC spy-cam fame).

**Sat. 19<sup>th</sup> March AGM AT TAUNTON + TALK** AGM at 11.00am followed by Lunch at the Merry Monk Inn, then a talk by John Dike on the “Battle of Trafalgar” at 2.00pm.

**Wed. 15<sup>th</sup> June VISIT DEAN FOREST RAILWAY** Details to be announced later.

**NEXT EDITION** - This newsletter is produced every four months. Please send articles, photographs etc to :- Peter Lamb 35 Station Rd, Backwell, Bristol BS48 3NH or telephone on 01275 463160 or e-mail him on [lambpandv@btinternet.com](mailto:lambpandv@btinternet.com).

