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SCMS

The Society of Consulting Marine Engineers & Ship Surveyors

Unit 5, Prospect House 7 Ocean Way Southampton Hants SO14 3TJ





President's Note

Written by Stuart Gladwell, CEO, on behalf of Nick Gladwell

SCMS 2018 Overview

2018 has been another busy year for SCMS both in its capacity as a Certifying Authority and as a membership society. We now have more vessels on our books than ever before as we continue to try and maintain the same efficiency and level of service that our customers have come to expect over the last few years.

We enjoyed another good year at Seawork in July where the office staff were able to put a lot of names to faces with so many of our members in attendance. This led on to our AGM where Mark Lockie stepped down as President and Nick Gladwell took over. In addition, Marcus Lankford took up the role as Vice President joining Allan Larsen who is set to take over from Nick in 2019.

In order to progress with both our quality and training requirements we took on a new employee Kerry Salter in July to help us to keep pushing forward and improving.

September saw another change as our Office Administrator left SCMS due to relocating with her fiancé to Manchester. Luckily we managed to employ Tom Gleeson to take over this role, and with his previous experience in customer service, he has very quickly managed to find his feet and become a vital member of our team.

We had our MCA monitoring visit for our CA activities at the end of September. This went very smoothly despite Tom having only started 2 days prior! Now that he is up to speed we are looking at ways to further progress both the Membership and CA elements of the Society. Currently, membership packs are being designed so that more information can be sent out to new and renewing members in the near future.

Due to the Society's centenary coming up in 2020 we are thinking of ideas to celebrate this. One of the ideas presented has been to gather together images to produce a photo book to represent SCMS through the ages. We would welcome any photos from our members to be sent in to sec@scmshq.org.

Any other ideas from our members on how they would like to celebrate the centenary would be greatly welcomed, and again can be sent into the above address or can be sent to our address in Southampton at: SCMS, Unit 5 Prospect House, 7 Ocean Way, Southampton, SO143TJ.

Stuart Gladwell

SCMS CEO

SCMS Benevolent Fund

Members are reminded that the Benevolent Fund is circumstances through a third party and I suspect there charity ". In the past we have only found out about some Gladwell. Contact details as for the SCMS office.

available for Members who have fallen on hard times or are a few instances where if we had known of the cirwho are in need of Medical care. I am aware that some cumstances we could have been of some help. Requests people are too proud to consider what they think of as " or information should be directed to the CEO Stuart





Vice-President's Note



Following Nick Gladwell's Presidents Introduction published in the last edition of the Link magazine, the council of SCMS considered that an introduction of both Vice Presidents and subsequently members of the council, would be a worthwhile exercise for all members of the society. I have the pleasure of writing at this time and my colleague Marcus Lankford, also

Vice President, will kindly follow suit in the next edition.

My name is Allan Larsen and I joined SCMS relatively recently in 2014 before progressing to Fellow in mid-2017. I was delighted to also become a member of the council and I have grown to firmly believe in the role and purpose of the SCMS and to appreciate the efforts of all who contribute to it, either as staff or, in voluntary roles.

For me, my maritime career commenced in 1987 as a fresh faced sixteen-year-old Marine Engineer Cadet having successfully secured a cadetship sponsored by the Ben Line Steamers Ltd. I followed the traditional three phase cadetship with my first two years being spent at South Shields Marine & Technical College (Now named South Tyneside College I believe), phase two at sea sailing between Europe and the Far East and a final year back in "Shields". I must say even now, more than thirty years after commencing my cadetship, I still hold a wealth of very happy memories and have even managed to stay in contact with some of my fellow cadets!

Following my cadetship, I moved into the North Sea and worked on-board stand-by ships as second engineer. Not my best decision I must say, but I did learn as much about storm force weather as I did about constant repairs during a six hours on / six hours off - 28 days on / 28 days off cycle. Oddly enough, the 28 days on-board seemed to pass very slowly and the 28 days off passed very quickly.

A shoreside position then attracted me back to my home town of Renfrew (near Glasgow) in Scotland and I joined Inverlane Marine Services. This was a great learning platform and a job which I thoroughly enjoyed for four or five years. Each day I would be refurbishing marine plant including diesel engines, purifiers, electric mo-

tors and so on. I was also able to develop my turning and welding skills and the role exposed me to many hours of working with surveyors of various roles including class and owners representatives.

Despite my great job satisfaction at 'Inverlane' I realised that career progression was stalling and almost about the same time I was offered a position with Ferguson Shipbuilders on the River Clyde. I joined Fergusons as Assistant Mechanical Design Engineer and, somewhat sooner than intended by the yard and by myself, found myself being promoted to Mechanical Design Engineer, more by fate than by planning. This was however another fantastic opportunity for me, as a twenty-something year old professional, to be back on a steep learning curve and I will never take for granted the extent of knowledge which I had the opportunity to gain in the shipyard.

In 2001 I took the decision to leave Fergusons and joined the Classification Society named Bureau Veritas (BV). Some of you may be familiar with BV of course. This was, in my eyes, my career really taking shape. Although I didn't realise it at the time I would spend the next fifteen years of my career in this employment and I certainly didn't realise the extent of the roles which I would work in nor the number of air miles I would accumulate as I jetted around the globe! My BV career commenced in Glasgow but then took me to Newcastle (UK) for several years, then Humberside (UK) and finally to the societies head office in Paris for seven years. During my BV career I trained and worked as a class and statutory ship surveyor (all marks and all notations), auditor, trained trainer and Head of Section for Damage Repairs (ship) and for Offshore Units in Service.

By 2013 I was becoming a little bit older but still as enthusiastic about marine engineering, survey and the maritime world in general, as I had ever been - more so perhaps. A new challenge was required, and I knew what that had to be!

After much deliberation, some hesitation and admittedly very little research, I decided to move into business for myself. With the full and much appreciated support of my now good lady wife Lynsey, I took a deep breath and made that most exciting but very worrying of steps into self-employment. Thankfully, with more than a little hard work, and the support of many, this phase of my career has also gone well, so far.

Contd. /





Vice-President's Note

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...and now. Well now, I have the very real privilege of being Vice President of the SCMS and to be able to assist is still attracting its members of the future. Long may in ensuring the future of this long established society. We have not only a responsibility to the current and future members, but also to those who founded and developed the society over the years. Where we take the society from here is a big question, but the recent in

crease in applications to join is a sure sign that the SCMS this continue.

Eurlng ALLAN T LARSEN CEng. CMarEng. FIMarEST. FRI-NA. FCMS.

Obituaries

Michael David Tillman FCMS

28th May 1939 to 5th October 2018



It is with the deepest regret that we announce the death of Mike Tillman on the 5th October 2018 at the Ruthven Towers Nursing Home in Auchterarder, Scotland. As some may know Mike had been severely ill for about a year prior to his death. Earlier this year he had one leg amputated and not long after that he had the second one amputated as well. He had only been out of hospital and in the nursing home for a few days when he passed away in his sleep. I had been in regular touch with Mike during his illness and was impressed with his fortitude and positive attitude during the worst periods of his illness. Now he is at peace and together with his beloved wife Molly who predeceased him some years ago. We offer our sincere condolences to his family in the

knowledge that they were always in his thoughts.

Mike had an interesting career. Having left grammar school at the age of 16 he entered the Royal Navy as an apprentice shipwright and later transferred to the engineering department attending the Royal Navy Engineering College in the process. He served in various types of vessels from Minesweepers, Frigates, Heavy Repair Ships, Diving Ships and Aircraft Carriers. After 23 years in the Navy he left in 1978 to seek a career ashore.

His first action was to take a Business Course at Strathclyde University, followed by a spell developing GRP materials for commercial fishing vessels. This was followed by 13 years at the Seafish Authority where he became a Principal Surveyor.

Subsequently in 1992 he became a self employed Marine Surveyor and worked this way until he retired in 2016.

In 1998 when the Workboat Code was first established it gave Mike the opportunity to use the skills he had acquired over the years and he soon became a much sought after examiner of these vessels.

Clients of his that I have spoken to regarded him as being fair as a Surveyor and extremely helpful in finding solutions when a vessel or a piece of equipment fell short of the standard required. He also acknowledged that he did not know everything and was not afraid to ask questions of those who he thought had the answers to his question.

Mike was also a very staunch supporter of SCMS and proud of the fact that he had been elected a Fellow of the Society. He will be sadly missed by all who knew him.





Editor's Note

Another year has almost ended and where has the time gone? Business wise it has been a little better than 2017 for those involved in the Workboat side of the business but the larger vessels still appear to having a poor time. I trust that in 2019 the markets will improve and there will be more work available for everyone.

On behalf of myself and everyone at SCMS may I wish everyone a *Happy Christmas and a Prosperous New Year*.

Revised Workboat Code update: This last week I attended a meeting between the Workboat Association and the MCA when it was stated that the MCA were still

hoping to have the revised Workboat Code approved and ready for printing by the end of the year. At the time of going to press, I understand that this is likely to happen.

Under 500 ton Code: This code is unlikely to be approved at anytime in the near future but there is a possibility that we could put in place a Large Workboat Code for workboats under 500 tons. Since this is the way that the market is going it is something that we are exploring and hopefully we will be able to put something in place.

Norman Finlay, FCMS, Past President

The following article is reproduced from The Wire, with the kind permission of the ITIC



Expertly witnessed!

This edition of the Wire follows a panel discussion at ITIC's offices on the subject of the expert witness.

The panel included Andrew Squire, LOC Group Ltd; Keith Hart, Hart Marine Consultants Ltd; Colm Nolan, Baltic Exchange Expert Witness Association; Darryl Kennard, Thomas Cooper; and Andrew Jamieson of ITIC. Topics of discussion ranged from reviewing the liability of the expert witness; the incorporation of standard terms and conditions, to effective report writing. The evening was well attended with over 100 guests, many of whom stayed for drinks and catch ups with old friends and colleagues.

The potential liability of experts for negligence means that the duty should not be undertaken lightly and all

professionals should be aware that expert witnesses can find that they are the ones who end up in the dock.

ITIC provides professional indemnity insurance to a wide range of expert witnesses. Some of the assureds act as an expert witness as a regular part of their professional practices. Some, however, are occasionally asked to act in this capacity without specifically seeking the appointment.

Regardless of how one may arrive in the witness stand, and no matter how confident one may be in a well-researched and thoroughly vetted series of responses, professional indemnity insurance is essential. Should a claim be forthcoming, you will then be prepared, as any expert would be for any eventuality.





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10 Golden Rules of loss prevention for Expert Witnesses

These are ten golden rules drawn from ITIC's experience of defending experts:

- 1) A lot of appointments are casual. If you are a professional then you should have terms and conditions. ITIC has drafted some standard trading conditions for expert witnesses which you can find here. These trading conditions may need adapting to your circumstances but are a good starting point. Contracting on a sensible basis will greatly assist if a dispute arises.
- 2) To err is human the answer is insurance. The professional's clients should be able to expect that if the professional makes a mistake there is a reasonable sum available to compensate them. Meeting this expectation underpins confidence in the professional's marketplace. That is one of the roles of professional indemnity insurance.

In addition to the potential liabilities, even an "innocent" expert can face substantial legal costs dealing with a claim. At best only a proportion of these costs will ever be recovered. One important consideration is that appointment as an expert is a personal appointment rather than a company one. Make sure your company's policy covers you, as an individual, when acting as an expert, and not just when you are acting in the name of the company. Once you have appropriate terms and conditions and insurance there are some important considerations about how you perform your duties.

3) Don't allow your desire to help your client blind you to the evidence. Our adversarial system doesn't help. You will be described as "our expert" and the opponent's witness as "their expert". In spite of this, you are there to be an impartial expert, not an advocate of your client's case. Problems happen if you allow yourself to over zealously "support the cause". Your client will blame you if he loses.

- **4)** As it says in the statement of truth you must sign, your evidence must be your complete professional opinion. Check that you haven't disregarded anything because it doesn't fit your theory.
- **5)** The purpose of your evidence is to explain technical matters. This is very different from stating what you would have done in similar circumstances. Justification of your usual practice can taint your evidence.
- **6)** Don't be bullied. A survey conducted by an expert witness training company found that one in ten expert witnesses had been pressurised by a lawyer into changing evidence before the case had gone to court. It is your evidence and if it goes wrong you will have signed off on it.
- **7)** Challenge inadequate or misleading instructions. The Expert Witness Institute's terms make it clear that you are to be provided with comprehensive instructions.
- **8)** Don't accept instructions if you cannot be independent. The expert may be faced with a business dilemma of not wishing to alienate the principal but simply not wishing to say what is required.
- **9)** Check that you are not conflicted. A surprising number of experts accept an engagement only to find that a colleague has dealt with the opposition.
- **10)** Don't stray outside the area of your expertise. Lawyers will seek to challenge whether the opponents' expert is properly qualified to comment on every aspect of the case. If they can show you lacked expertise for part of your report your work will be discredited.





Rolls-Royce unveils new waterjet range for workboat sector

Rolls-Royce unveiled a new range of Kamewa waterjets today at the International Workboat Show, in New Orleans, USA.



Taking more than three-years research and development, the new A5 Series improves upon the popular FF range of Rolls-Royce Kamewa waterjets by providing greater thrust from a waterjet with a more compact inboard footprint.

Geared towards smaller boats and craft up to 25m in length, the A5 series is manufactured from high-grade marine aluminium and available in seven sizes with power outputs between 100kW and 1230kW. The A5 will eventually replace the FF range and size 29 will be first to hit the market.

Speaking at the A5's official unveiling, Fredrik Appel, Rolls-Royce General Manager Product – Waterjets, said: "The A5 is a completely new product, which is developed on the same design principles as our renowned steel series. All aspects of the product are improved compared to our existing FF series. Overall pump efficiency is improved by 3%. Steering and reversing efficiency is improved by 8% and bollard pull is improved by 13%".

"Besides the propulsion improvements, we have reworked the mechanical design to gain the benefits of a harmonized series, and by this gaining more accurate performance predictions. We have listened to our customers asking for a smaller inboard footprint and adapted the design to meet this by reducing the space by 20%. However, we have also maintained an inlet waterway to accommodate the propulsion improvements."

Extensive Computational Fluid Dynamics (CFD) analysis and model scale testing at the company's hydrodynamic research facility in Kristinehamn, Sweden, was involved in the A5's development. Additionally, by incorporating elements from the proven S4 and S3/CA steel series of waterjets, Rolls-Royce has improved the axial-flow type waterjet to produce a smaller waterjet without the need for a comparative reduction in the power requirement.

"Working with our colleagues in Finland and Sweden, we have produced an axial flow waterjet that has a smaller footprint yet delivers improved steering and reversing efficiency, higher thrust at low to medium speeds and increased bollard pull performance."

Shival Sapre, Rolls-Royce General Manager Sales, Americas, added: "The Rolls-Royce Kamewa A5 Series offers the best price per performance for vessels operating at speeds between 25 and 40 knots. The Kamewa A5 is a cost-effective waterjet solution for workboats, motor yachts, smaller passenger vessels, patrol boats and other high-speed, shallow draught vessels.

Rolls-Royce has successfully carried out in-service trials of the new waterjet onboard its own demonstration vessel – a crew transfer/harbour patrol vessel operating in Kokola, Finland.

An A29-5 unit, the first product in the series to be released, is exhibited at the International Work Boat Show on the Rolls-Royce booth 2501.







Green measures could cause shipping markets to seize up, industry warns

From The Daily Telegragh—5th November 2018 - Alan Tovey

A row has broken out in the shipping industry over new environmental regulations that are causing the market to seize up and could hit traders with multi-million dollar losses.

From January 2020 ships either have to use less polluting fuel or have "scrubbers" fitted which clean harmful emissions out of their exhaust, under International Maritime Organisation (IMO) rules.

London's Baltic Exchange, an index provider and information centre for trading and settling shipping contracts, and which is the global centre for maritime trade, is consulting with its industry members on how it will change its indices to reflect the new regulations.

However, traders say the availability in the market for "forward freight agreements" (FFAs) - futures contracts to ship commodities - has dried up for deals after 2020 because of uncertainty over how Baltic Exchange will price them to take into account the tougher and more expensive environmental regulations.

FFAs allow business to hedge costs of transporting commodities in the future, stabilising the industry against swings in the market.

Traders also fear that if the Baltic Exchange changes its indices - which are used as a benchmark against which to price contracts - so that they reflect the expected higher costs of meeting the new environmental legislation, they could be left with losses on FFAs they have already agreed from 2020.

If the pricing changes on the contracts in the way they fear, traders say they could collectively face losses of \$500m.

Traders also claim the Baltic Exchange's consultation is not being carried out in an open way, with the organisation consulting from its 600 or so members and not the wider shipping industry, which relies on its indices to price contracts.

"Meeting the IMO's emissions target is one of the biggest challenges for the industry in years but the recent past has shown that when measures are taken -

whether by benchmark administrators, exchanges or regulators - without consulting the industry, it can lead to serious market disruptions," said Filimon Antonopoulos, director of Tallon Commodities, which trades in FFAs.

"In the case of the 2020 fuel new specifications, so far the Baltic Exchange has not managed to convince the industry that they are treating the affected indices fairly, creating a potential \$500m headache.

"The Baltic must change its approach and stop driving down liquidity in a vital market that enables the commodities industry to hedge their future freight costs."

Another major shipping trader described the FFA market as a "guessing game" until it is known how the indices will be priced.

"There's hardly any market for contracts post-January 2020," he said. "People just don't know what's going to happen and you can't trade in a fair way when you don't know what's happening to pricing."

A spokesman for the Baltic Exchange said it was assessing how it should "best reflect" the IMO changes, with "detailed evidence being gathered from shipbrokers, traders, refiners as well as shipowners and operators".

SCMS Ties

Dark blue ties with the SCMS logo now available to order for £7.50

(including postage & packing)

Contact the SCMS Office for detail







World Maritime Day Celebrated at International Maritime Organisation Headquarters



The SCMS President and his wife, Nick and Christine Gladwell, meeting the Secretary General of the IMO, Mr Kitack Lim and his wife. 29th September 2018

The President of the SCMS was invited to an evening reception at the International Maritime Organisation (IMO) in London to celebrate World Maritime Day 2018. The event was well attended with representatives from all over the world coming together to share experiences.

In 2018, IMO celebrates 70 years since the Convention establishing the Organisation was adopted. Seventy years of IMO efforts to promote safe, secure and clean shipping are being celebrated under the theme "IMO 70: Our Heritage – Better Shipping for a Better Future".

The Secretary-General stated that this celebration also provides the opportunity to take stock and look back, but also to look forward, addressing current and future challenges for maritime transport to maintain a continued and strengthened contribution towards sustainable growth for all.

To read more about the IMO, its 70 year history and celebrations and listen to the IMO Secretary-General's address, please visit the IMO's website at: http://www.imo.org/en/About/Events/WorldMaritimeDay/Pages/WMD-2018.aspx

WANTED

ARTICLES required for the next issue of Link - Deadline 22nd February 2019 – The article can be technical or perhaps the details of something which has happened during the course of your working life. There must be a fund of stories out there which are worth retelling.

ADVERTS can be taken either as a full, half or quarter page with a corresponding cost of £ 100.00 / £50.00 / £25.00. Even if you do not want an advert yourself, if you know someone who might please advise and we will contact them accordingly.

Please contact the Editor via email - normanfinlay7@gmail.com





Cruise giants sail into a SULPHUROUS storm

From The Mail on Sunday—11th November 2018 - William Turvill



In an echo of "Dieselgate", billions of pounds are being poured into fitting ships with controversial 'scrubbers'. They cut air pollution – but critics say they just poison the sea.

Shipping firms are preparing to invest billions of pounds into controversial machines that critics say will pump our oceans with polluted water.

US investment bank Goldman Sachs estimates that up to 5,000 vessels will be fitted with so-called scrubbers in the coming years, at a cost of up to \$10 million (£7.6 million) per ship.

Scrubbers stop sulphur emissions from being pumped into the air through exhaust pipes – but the vast majority of the devices then divert the waste into the sea.

Opponents say this can be hugely damaging to sea life, with studies showing that scrubbing technology can lead to water acidification, threaten marine ecosystems and harm coral, algae and shellfish.

It is the latest threat to the world's oceans after plastic pollution triggered growing awareness about the effects of commercial waste.

Goldman Sachs, known as the 'Vampire Squid' for its grip on the banking market, has identified them as a way for multinationals to save money on fuel.

This is because scrubbers allow shipping firms to get round strict regulations that from 2020 will restrict the use of cheaper, 'dirty' fuels. Companies including Carnival, the FTSE 100-listed owner of P&O and Princess Cruises, have already started installing the technology on

their vessels ahead of t he crackdown.

One shipping industry boss last night compared the use of scrubbers with the Volkswagen 'Dieselgate' scandal, where the German carmaker was found to have misled regulators and customers by hiding nitrogen oxide emissions during vehicle tests.

He also suggested firms using scrubbing technology – which has been banned in some countries, including Belgium – are cynically putting profits before the environment.

Patrick Rodgers, the boss of Euronav, a large tanker company that is refusing to install scrubbers on its ships, said: 'I think when the public wakes up to the industrialisation of pollution from the atmosphere to the ocean, the industry will face as big a backlash as VW did during its emissions scandal. Scrubber users have been seduced by the prospect of making super profits from being able to use what they think will be cheaper, dirty fuel.'

He added: 'Using scrubbers faces a simple test: could you justify to your family that you're meeting pollution regulations by pumping sulphuric acid and other equally nasty by-products into the oceans?

'I don't see how it makes sense to solve one pollution problem by creating another.' New International Maritime Organization (IMO) regulations, which come into force in 2020, will prohibit ships from using fuel that is made up of more than 0.5 per cent s u l p h u r, down f rom 3. 5 per cent currently. Fuel with such low sulphur levels is up to 50 per cent more expensive, experts say.

However, there is a loophole in the rules. Ships will be allowed to keep using cheaper, grubbier fuels which contain more t han 0.5 per cent of t he chemical if they have scrubbers fitted.

In a report seen by The Mail on Sunday, Goldman Sachs estimates that the cost of installing a scrubber is between \$5 million (£ 3 . 8 million n) and \$10 million (£ 7.6 million). It was reported in May that the US bank is offering to help companies finance the installation, but Goldman now denies this claim.

Malcolm Latarche, a maritime expert at ShipInsight, calculates that, at those prices, firms which install scrubbers will make their money back within a year. Ned Molloy, an independent oil analyst, said: 'The attitude in the industry is that this is allowed by the rules, and it's a more profitable route, so why not?'

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Cruise giants sail into a SULPHUROUS storm

From The Mail on Sunday—11th November 2018 - William Turvill

But he added that there is a danger t hat regulations could be changed to outlaw scrubbers in the future.

The chairs of two influential UK parliamentary committees have questioned Ministers on the environmental impact of scrubbers.

Conservative MP Neil Parish, head of the Environment, Food and Rural Affairs Committee, has challenged both Environment Secretary Michael Gove and Transport Secretary Chris Grayling on the technology.

Dr Sarah Wollaston, the Tory MP for Totnes, who chairs the Health and Social Care Committee, has questioned the impact it could have on British seas.

Nusrat Ghani, a Minister in the Department for Transport, said: 'The Government has not seen any evidence t hat t he use of scrubbing technology would have any significant effect on marine environment.'

Ghani added that the systems 'collect and store any sulphur residue and solid particulate matter on board the vessel, to be deposited at a port waste reception facility'. However, this claim is challenged by parts of the indus

try. Euronav estimates that 95 per cent of scrubbers that have been fitted to ships so far are 'open loop', meaning that they discharge waste water constantly rather than at port waste stations.

A study by German environment agency UBA on scrubbers in 2015 found: 'The discharge of wash water [through a no pen loop system] to the sea contributes to acidification of seawater, since the air pollutants are converted into the strong sulphuric and nitric acids.'

It also pointed to a separate study, which found that 'increased acidity poses a threat to marine ecosystems, harming species such as coral and algae, as well as commercial aquaculture species, such as shellfish'.

Carnival, which has installed open loop scrubbers on to 70 of its ships at a cost of \$ 500 million, denied the machines are damaging to the environment.

Mike Kaczmarek, vice president of marine technology at Carnival, t old The Mail on Sunday t hat scrubbers have a 'negligible environmental impact', adding: 'It's not a bad thing. The oceans are actually a natural reservoir for the earth's sulphur.'

He accused shipping rivals who have not invested in scrubbers of spreading 'disinformation' about their harm to the environment, and claimed that lower sulphur fuel – as well as being more expensive – consumes more energy to make.







Government tightens the screws on offshore wind battle for £60m subsidies

From The Daily Telegraph—20th November 2018 - Jillian price of £105/MWh. **Ambrose**



Offshore wind farm developers will need to put up a fight to clinch contracts worth £60m a year under new rules which will slash the starting price the upcoming subsidy auction in half.

The cost of supporting offshore wind farms has plummeted in recent years, but ministers expect even deeper cuts to the auction bids put forward by developers this spring.

The starting bid for wind projects which begin generating power in the 2023/24 financial year cannot be higher than £56 per megawatt hour of power produced.

This is already cheaper than the rock-bottom bid of £57.50/MWh which earned developers a contract in last year's auction where bids tumbled from a maximum

Offshore projects which begin spinning in the 2024/25 financial year cannot enter a bid higher than £53/MWh, almost half the cap set only eighteen months ago.

The Government's subsidy expectations are lower than the market price for baseload power futures contracts which have remained stubbornly above £60/MWh since the summer.

"The Government is really turning the screws on the offshore wind industry in this auction," said Richard Howard, an analyst at Aurora Energy.

"In order to be successful, projects will have to be brought in at a lower cost than any offshore wind project in the UK to date. This cost trajectory will be challenging for the offshore wind industry to achieve, and relies on the supply chain bringing forward a new generation of very large turbines," he said.

Meanwhile, ministers are finalising the details of a sector deal for offshore wind which will force developers to include more UK manufacturers in the construction of major offshore projects.

Almost 50pc of the components used to build an offshore wind project are sourced from local supply chain companies, but Government faces rising calls to up the ante on this target.

Energy minister Claire Perry told the House of Commons that Government is in the "final stages of concluding our offshore wind sector deal" which will include "a series of substantial commitments from the operators in the sectors to increase the UK content that will be spent".

