

N1: Champions for Wind in association with HETA and Forewind

present:

N2: Offshore Wind: Renewable Energy in The East Riding

N3: Scene 1: The Boardroom

N1: *(Lloyd Sugar, Mick Hewer and Sharon Brady sit at a huge table. Lloyd Sugar has a face like thunder)*

N2: *(Outside the Boardroom, the Secretary works at her desk. Apprentices Scot, Aya and Inga Land and Greta Britain wait next to her)*

N3: *(Lloyd Sugar presses the intercom button)*

Lloyd Sugar: Alright. Send 'em in.

Secretary: Lloyd Sugar will see you now.

N1: *(The Apprentices file in. Lloyd Sugar jabs his finger at them)*

Lloyd Sugar: I don't know how you've got the nerve to walk back in this room.

Greta: What do you mean, Lloyd Sugar?

Lloyd Sugar: Your task was to find a sustainable energy source for East Yorkshire. And what did you come back with?

N2: *(Sharon Brady reads from her report on the team)*

Sharon Brady: North Sea oil and gas.

N3: *(Scot leaps in helpfully)*

Scot: And coal. There's a lot of coal underground in Yorkshire.

Mick Hewer: So your plan is to keep burning fossil fuels.

Greta: *(Cheerfully)* Yep. Fossil fuels have worked well for the last 200 years, so we're sticking with them.

N1: *(Lloyd Sugar explodes)*

Lloyd Sugar: Then you're a bunch of LIGHTWEIGHTS! There is no future in fossil fuels.

Mick Hewer: Fossil fuels are non-renewable.

Sharon Brady: And they pollute the atmosphere. You only have to look at the stuff belching out of Drax power station on the M62 to see that.

N2: *(Aya suddenly springs to life)*

Aya: My uncle works at Drax! It burns 36,000¹ tonnes of coal every day!

Mick Hewer: Exactly. It's the single biggest emitter of carbon dioxide in the U.K.

Lloyd Sugar: The greenhouse gases that Drax chucks into the atmosphere contribute to global warming and rising sea levels.

Sharon Brady: They drift over East Yorkshire, past Goole, through Beverley, over Hull, on to Bridlington and across the sea to Norway, Denmark and Sweden.

Inga: Well, that's not our country, so that's not our problem.

N3: *(Lloyd Sugar thumps the table)*

Lloyd Sugar: Greenhouse gases are everybody's problem. I wouldn't wanna live in Easington or Sunk Island when the sea levels rise.

Mick Hewer: *(Calmly)* The other problem you've got with fossil fuels is that they're not sustainable.

Lloyd Sugar: Which means they're gonna run out. There's an energy crisis, in case you hadn't noticed.

Mick Hewer: *(To Sharon)* How long is it before fossil fuels are exhausted?

N1: *(Sharon consults her notes)*

Sharon Brady: Not long. North Sea oil will be finished in the next 50 years and North Sea gas will run out about 20 years after that.

¹ <http://www.draxgroup.plc.uk>

Mick Hewer: *(To the Apprentices)* So it looks like you've got about 70 years worth of oil and gas. Not looking very sustainable, is it?

Scot: You forgot about coal! Britain has enough coal supplies to last 250 years.

Lloyd Sugar: But it's still gonna run out in the end! It. Is. Not. SUSTAINABLE!

N2: *(Lloyd Sugar slaps his hand to his forehead)*

Lloyd Sugar: Where do they get these people? Don't they know what 'sustainable' means?

N3: *(Inga suddenly sees her chance to go through to the Final)*

Inga: I think we should rely on nuclear energy.

N1: *(Lloyd Sugar shakes his head in disbelief)*

Lloyd Sugar: What?

Inga: Yes, nuclear power can solve the energy crisis.

Lloyd Sugar: I can't believe I'm hearing this.

N2: *(Sharon Brady sits forward to clarify the situation)*

Sharon Brady: Nuclear power depends on uranium, and uranium will run out eventually. It's another non-renewable energy source.

Greta: *(Glaring at Inga)* And it generates radioactive waste which has to be stored for thousands of years before it's considered safe.

N3: *(The situation is finally dawning on Scot)*

Scot: So basically, what you're saying is that coal, oil, gas AND nuclear power are all non-renewable resources. When they're gone, they're gone.

Lloyd Sugar: Now they get it. About time.

N1: *(Lloyd Sugar glares at the Apprentices)*

Lloyd Sugar: I'm gonna give you one last chance to find a sustainable energy source for East Yorkshire before I fire the lot of you. Now, **GET OUT OF MY SIGHT!**

N2: *(The Apprentices fall over each other to get out of the Boardroom. They get as far as the Secretary's desk. She carries on typing)*

Greta: Right. We need a sustainable source of energy and we need it now. What are the options?

N3: *(Secretary picks up her note pad and reads:)*

Secretary: The options are: tidal energy, solar energy, wave energy, hydro-electric power, (or H.E.P. for short), biofuels, geothermal heat or wind power.

Scot: But which is best suited to the geography and climate of East Yorkshire?

N1: *(Secretary turns and talks to them like a helpful parent)*

Secretary: Let's think about this. When did you last go to the seaside?

N2: *(Inga puts her hand up like a child)*

Inga: I had a holiday in Scarborough last year.

Greta: We go to Hornsea most weekends.

Aya: My Gran lives in Hunmanby.

Secretary: And what was the weather doing the last time you were there?

Aya: Blowing a gale.

N3: *(The penny drops for Scot and Greta)*

Scot: Of course. Yorkshire has nearly 100 miles of coastline.

Greta: The average wind speed off the east coast is over 25 miles an hour.²

Aya: Yep. That's what it feels like on Hunmanby beach...

² David MacKay estimates an offshore wind power density around the UK of 3 W/m² - 50% larger than the onshore estimate of 2 W/m². See Sustainable Energy without the Hot Air.

Secretary: So stick some wind turbines out in the sea and harness clean, renewable power that never runs out.

Inga: That's brilliant! Offshore wind power is perfect for East Yorkshire - why didn't we think of it before?

Greta: BaE Systems in Brough trains skilled engineers whose jobs are under threat. We could use their expertise to build the turbines.

Inga: And we know how to work out at sea - half my family are fishermen.

Aya: My Grandad was an Arctic trawlerman.

Scot: There you are: the sea's in our blood.

Greta: Offshore wind energy is a no-brainer. Let's report back to Lloyd Sugar.

N1: *(They turn as if to head back to the Boardroom. Secretary stops them)*

Secretary: I know a better place to take brilliant ideas. Follow me.

N2: *(All Characters exit. PPO plays theme to The Apprentice³)*

³ Dance of the Knights from Prokofiev's Romeo and Juliet

N3: Scene 2: The Dragons' Den

N1: *(Enter Theo Fajitas, Duncan Hammertime, Hilary Devil, Debra Bleedem and Peter Loans. They sit in a line across the front of the whiteboard with wedges of cash beside them)*

TV Announcer: Next into the Dragons Den is a group of entrepreneurs with plans to create a sustainable energy supply for East Yorkshire.

N2: *(The Apprentices file in and stand to the side of the whiteboard)*

Aya: Hello Dragons. Our idea is to harness the power of the wind to create clean renewable energy for the East Yorkshire area.

Inga: We plan to build an offshore wind farm, 54 kms out to sea in the Dogger Bank.

Greta: At 9000 square kilometres, the Dogger Bank site will be three and a half times the size of East Yorkshire.⁴

N3: *(Theo Fajitas raises his eyebrows - he's impressed. Peter Loans scribbles in his notebook)*

Scot: We intend to build 1,500 wind turbines⁵ and we estimate that they will generate 9 gigawatts of energy per year.

Aya: That's double the output of Drax power station.⁶

Debra Bleedem: That's one hell of a lot of energy.

Scot: We have chosen to site the wind farm offshore for many reasons:

Number 1: The winds offshore are stronger and steadier than on land, so we get more power per unit area.⁷

Greta: **Number 2:** The sea is shallow enough to build the wind turbines. Construction teams and maintenance workers can work in relative safety.

⁴ Energy fact sheet pdf Dogger Bank the size of N Yorkshire 125 to 290 km offshore

⁵ The Guardian 2010

⁶ 10 million tonnes of coal a year burned in Drax.

⁷ David JC MacKay Sustainable Energy without the Hot Air

Aya: And **Number3:** East Yorkshire people are strongly connected to the sea. We have the skills to build, service and maintain a major engineering project like a wind farm out in the North Sea.

Hilary Devil: Can I just stop you there? A lot of people object to wind farms. They say they're noisy and spoil the landscape.

Inga: That's what's so great about Dogger Bank - it's so far out that nobody on land can see the wind turbines, let alone hear them!

N1: *(Duncan Hammertime leans forward in his chair)*

Duncan Hammertime: Tell me something. All this electricity you're generating. Who gets to use it?

Scot: The power will come in to a substation at Cottingham and the energy will be directed to homes and businesses in the Yorkshire area.

Duncan Hammertime: So it stays local.

Aya: That's right.

Inga: There are about 104,000 homes in Hull; we estimate that all the city's energy requirements could be supplied by 30 turbines.

Duncan Hammertime: And you're proposing to build 1,500 turbines. *(He nods to himself)* Interesting.

Theo Fajitas: There's one thing that bothers me. What effect will a wind farm have on marine life?

Aya: We think it's possible that it could be beneficial to fish stocks. The turbines could act like an artificial reef, providing fish with extra food and shelter.

Theo Fajitas: What about bigger sea creatures like sharks, dolphins and whales? Won't they get confused by the electromagnetic fields generated by your equipment?

Scot: We don't think so. All electromagnetic cables will be buried to avoid that problem.

N2: *(Peter Loans is more concerned about the effects on human beings)*

Peter Loans: I can see a lot of good coming out of this. The traditional fishing industry is in decline –a wind farm would bring jobs back into the community. I like it.

Greta: Thank you.

Aya: Yes, thanks.

Peter Loans: Just one thing. Wind's intermittent. What happens if the wind doesn't blow?

Scot: Britain is Europe's windiest country and there are plans to build wind farms all around the coast, so the wind's bound to be blowing somewhere.

Greta: It blows hardest at the times we need energy the most – during peak daytime periods and throughout winter.⁸

Inga: And the wind turbines keep working through the night when demand is low. It's possible to store the excess capacity generated to offset quiet spells of weather.⁹

N3: *(Duncan Hammertime is clearly very impressed)*

Duncan Hammertime: What you're proposing is staggering in terms of scale¹⁰ and it will help to make this country self sufficient in energy, so I'm in.

N1: *(Debra Bleedem spins round to face Duncan)*

Debra Bleedem: Hold on a minute, I was about to say that. I wanted 'in' before you did. *(She stands up)* You jumped in front of me. That's just rude.

⁸ http://www.foe.co.uk/resource/factsheets/wind_power_your_questions.pdf

⁹ For more information on storage technologies such as pumped storage hydro power schemes, and innovative solutions such as dynamic demand go to: http://www.foe.co.uk/resource/factsheets/wind_power_your_questions.pdf

¹⁰ Three wind farm sites to the east of Britain are on a staggering scale according to energy specialist Andrew Reid: "Looked at in their entirety, these are certainly the largest construction projects ever undertaken in the world." Guardian 2010

N2: *(Duncan Hammertime stands up)*

Duncan Hammertime: Don't tell me I've jumped in. I've been a supporter of renewable energy my whole life...

N3: *(Peter Loans stands up, followed by each of the Dragons in turn as they say their lines)*

Peter Loans: It was me that pointed out the benefits for East Yorkshire's economy. I saw its potential the minute I heard the pitch...

Hilary Devil: So did I! I can see 25,000¹¹ jobs coming to this region thanks to the offshore wind development...

Theo Fajitas: The Humber area could receive investment in renewable energy of up to £14 billion by 2015. I'm definitely in.

N1: *(TV Announcer cuts in)*

TV Announcer: And that's it from the Dragons' Den this week.

N2: *(Inga, Greta, Aya and Scot look at each other and quietly leave)*

TV Announcer: And now over to ITV for the employment gameshow: **Take Me On!** with your host: **Paddy McInnes!!**

N3: *(PPO plays gameshow style music as Paddy McInnes shoves the Dragons offstage)*

¹¹ National Skills Academy for Power: <http://www.thinkpowersector.co.uk/>

N1: Scene 3: Take Me On!

N2: *(Paddy bounces to the front of the whiteboard)*

Paddy: Welcome to **Take Me On!** I'm Paddy McInnes and have I got jobs for you?!!

N3: *(The audience whoops, cheers and claps)*

Paddy: These school leavers and university graduates are looking for jobs and one lucky employer gets to meet them all. Bring on the job seekers!

N1: *(PPO plays gameshow style riff)*

N2: *(Enter in order: Ben, Jen, Gwen, Len, Yen, Den, Ken and Penny. They wear smart interview outfits. They split into two groups either side of Paddy)*

Paddy: Give them a round of applause!

N3: *(The audience claps. Paddy goes to the end of the line and talks to Ben)*

Paddy: Ben, you're 15. You're planning to get good GCSE grades in Maths, English and Science. What then?

Ben: I've no idea. I'd like to do a HETA apprenticeship, but I'm not sure what to do it in.

Paddy: Right. And Jen, what about you?

Jen: I'm 19. I've been looking for a job since I left school.

Paddy: You seem a bit down about it.

Jen: I am, yeah. Unemployment's real bad round Withernsea.

Den: It's the same in Hull. Youth unemployment is twice the national average.

Paddy: Hey! Cheer up! The offshore wind industry's bringing thousands of jobs here in the next 20 years.

Den: I hope so. Because I don't want to move away just to get a job. I like it here.

Paddy: Well you're in luck because tonight, an employer from the wind industry is about to step into the Job Lift!

N1: *(The audience goes: 'Wooh!' Paddy returns to the centre stage)*

Paddy: Are you ready job seekers? *(He winks to camera)* Let the winkles see the pickers!

N2: *(PPO plays riff. The Job Lift descends and the doors open. Enter Win Turbine and Ray Newable in smart clothes and Juan Gigawatt in orange boilersuit and hard hat. There is a buzz around the job seekers, but Paddy is puzzled)*

Paddy: Three of you? What's going on?

Ray: There are so many jobs coming with the wind farm developments, all three of us are looking to recruit.

Paddy: Ding, dang dong! D'you hear that Den? Good news, my son!

N3: *(Den does a thumbs up, Paddy addresses the job seekers)*

Paddy: So, do you fancy a job in the offshore wind industry or not? You decide: no likey, no lighty!

N1: *(PPO plays riff. Len, Yen and Ken turn their lights off. Paddy goes over to Len)*

Paddy: Len, you turned your light off. Why?

Len: I don't want to work at sea. I want a job where I keep my feet dry.

Ray: Me too. But plenty of our jobs are on land.

Win: I'm in the research and planning department and I spend most of my working life in an office doing computer aided design - that's CAD for short.

Ray: Management, research and development, finances and HR¹² are all based onshore.

Win: It's the same with the manufacturing and operations sites. They're all located at ports like Hull or Grimsby.

¹² HR is the Human Resources Department. It deals with recruitment, training, performance and pay.

Juan: So you could be an electrician or a welder, a plater or a pipe fitter, a crane operator or a transport driver at any of those sites and you'd never get your feet wet.¹³

N2: *(Len is surprised)*

Len: Oh. Right. Well, I'll keep an open mind then.

Paddy: Good lad. Turn your light back on, fella.

Len: But it's not allowed!

Paddy: It is in this game.

N3: *(Paddy slams Len's light back on and moves down to Yen)*

Paddy: Yen! What's goin' on?

Yen: I'm at university doing Geography. I can't think of any jobs I could do on a wind farm.

Juan: There are loads of job opportunities for someone with a Geography degree.

Ray: You could be a geophysical surveyor and map the sea bed, to make sure we get the turbines properly positioned.

Win: Or you could analyse data about marine species, or the wildlife around the onshore pipeline.

Yen: Actually, that sounds interesting. Can I switch my light back on?

Paddy: Go for it! Don't diss what you might miss!

N1: *(Yen turns her light on. Paddy goes across to Ken)*

Paddy: What's wrong, mate? Don't you like the look of offshore wind?

Ken: No I don't. I'm a deckhand on a Bridlington lobster boat and we're all worried about what offshore turbines will do to lobster stocks.

¹³ Details from Your Career in the Wind Industry by Crown Estates

Yen: The sea round our coast is a perfect habitat for crab and lobster.¹⁴ The sea bed off the East Riding is the biggest fishery of its kind in the UK.

Ken: It is at the moment. What happens when you churn up the seabed?

Win: We're already working with representatives of the fishing community to try and prevent any harm to the fishing industry.

Juan: There are plans to establish a lobster hatchery in Bridlington in case breeding stocks are affected.¹⁵

Win: And Hull University is monitoring the impact. *(She looks across at Yen)* It's the sort of work you could get involved in.

Ken: I don't want the wind farms to destroy our traditional fishing industry.

Ray: Nobody wants that. We intend to work alongside the fishing community. You guys have a knowledge of this coastline that we value.

Juan: Fishermen already transport our engineers out to the turbines to do maintenance and operational work.

Win: And they crew our 'floating hotel' ship where workers stay when they're at sea. *(She glances across at the job seekers)* The 'floating hotel' needs catering staff too, if anyone's interested.

Ken: I don't know how I feel about the wind farm yet. I'm reserving judgement.

Paddy: No problem, Kenneth, my son. *(Paddy turns to camera)* So everyone but Ken's switched on to wind power. Will they still be switched on when they hear what friends of the wind industry have to say? Let's find out:

N2: *(Cut to:)*

¹⁴ Yorkshire Post Dec 2012

¹⁵ ditto

N3: Friends of the Wind Industry

N1: *(Enter 2 representatives of Friends of the Earth and the Department for Energy and Climate Change or DECC for short)*

FoE 1: Hi! **Friends of the Earth** is a big supporter of the offshore wind industry because wind is a free, inexhaustible energy source that doesn't produce waste products.¹⁶

DECC: The **British government** also supports the development of offshore wind farms because they help reduce our CO₂ emissions.¹⁷

FoE 2: Britain promised to do this by signing the Kyoto Protocol.¹⁸

DECC: The UK has made a legally binding commitment to produce 15% of the country's energy from renewable sources by 2020.¹⁹ Offshore wind will help us hit that target.

FoE 1: Government advisers suggest that Britain could eventually generate up to 87% of its electricity from renewable sources.

FoE 2: And we at **Friends of the Earth** totally approve of that. We campaign for a sustainable energy policy for the UK.

FoE 1: Otherwise Britain will: 'rely on fossil fuels and nuclear power, which carry the threats of radioactive pollution, acid rain and global warming for both this and future generations.'²⁰

N2: *(FoEs and DECC exit. Cut back to Paddy in the studio:)*

Paddy: So what's your opinion of the wind industry now?! If the job's not right, turn off your light!

N3: *(None of the candidates touches their light. Win, Ray and Juan look very pleased)*

¹⁶ Friends of the Earth http://www.foe.co.uk/campaigns/climate/issues/green_energy_index.html

¹⁷ Britain is also part of the EU, which also aims to reduce greenhouse gas emissions by 80 to 95% below 1990 levels by 2050.

¹⁸ The Kyoto Protocol is a global commitment to reduce carbon emissions

¹⁹ DECC <https://www.gov.uk/government/policies/increasing-the-use-of-low-carbon-technologies>

²⁰ http://www.foe.co.uk/resource/factsheets/wind_power_your_questions.pdf

Paddy: Penny, did you like what you heard about offshore wind?

Penny: I did. I'm a member of Greenpeace, so a job in the wind industry fits with my beliefs.

Paddy: Good on yer, Penny. *(He crosses to Gwen)* Gwen, you're studying to be an engineer at Hull University aren't you?

Gwen: Yes. I thought I'd have to emigrate to Denmark or Germany if I wanted a career in offshore wind, but now it looks like there are opportunities right here.

N1: *(Paddy swings round and points to camera)*

Paddy: So everybody's excited about the offshore wind industry, but who'll get lucky and find a job? Let's wait and see what happens after the break...

N2: *(Enter Lloyd Sugar, Mick, Sharon and all the Dragons)*

Debra Bleedem: I don't know what you're waiting for.

Mick Hewer: You've got a renewable industry that's crying out for workers.

Hilary Devil: You've got jobs to fill and apprenticeships to offer.

Peter Loans: You've got 250,000²¹ unemployed people in the East Riding.

N3: *(Theo points at the job seekers)*

Theo Fajitas: These people are looking for jobs. You've got jobs.

Sharon Brady: You've got jobs for university graduates and A Level students.

Debra Bleedem: In fact, as long as they've got 3 Cs or above in the core subjects and they're prepared to work hard, there are jobs for everyone here.

Mick Hewer: I'd interview the lot of them.

Juan: Sounds good to me.

Ray: And me.

Win: Let's do it.

Paddy: Hang on a minute! I've got flights to the Isle of Fernandos here!

²¹ Hull Daily Mail statistics 23rd January 2013

Theo Fajitas: What are the job prospects like over there?

Paddy: Not great, but ...

Duncan Hammertime: I've got a question: do they sell chips and patties?

Paddy: Not that I know of...

Duncan Hammertime: Then forget it, son. There's more exciting stuff going down on the Humber estuary.

Lloyd Sugar: Paddy, we gotta say it: You're fired. And you lot, *(He points at the job seekers)* fill in the application forms and get yourselves hired.

N1: *(PPO plays gameshow style music as candidates rush off to research the wind industry, look online for job vacancies or update their CVs. Lloyd Sugar, Mick, Sharon and the Dragons exit, followed by a despondent Paddy McInnes)*

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