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Environment Agency seminar - Generic Design  
Assessment of new nuclear reactors, 6 July 2010,  
Birmingham

# Environment Agency seminar – Generic Design Assessment of new nuclear reactors, 6 July 2010, Birmingham

This seminar formed part of our consultations on the Generic Design Assessment (GDA) of two new nuclear reactor designs (AP1000 submitted by Westinghouse and UK EPR submitted by EDF and AREVA). The consultations were launched on 28 June 2010 and will close on 18 October 2010.

The day - which was attended by a wide range of stakeholders - involved a mix of presentations and opportunities for participants to discuss, feedback opinion and ask questions in relation to the issues raised. The programme included a range of speakers from the Environment Agency and other organisations involved in new nuclear build (see below). It was independently facilitated by Icarus Collective.

All the views and questions recorded at the seminar will inform the ongoing consultation process on the GDA findings and the Environment Agency's decisions about the acceptability of the designs. We will carefully consider all of the issues and questions raised and respond to these in our decision document that we intend to publish in June 2011.

The consultation documents are available at:

<https://consult.environment-agency.gov.uk/portal/ho/nuclear/gda>

The aims of the event were to:

- Share the findings so far from our Generic Design Assessment of the two nuclear reactor designs.
- Respond to queries and gather initial views on our findings so far.
- Ask for views on our ongoing stakeholder engagement process (for GDA and site permitting).

## Presentations given

### Overview of GDA

Alan McGoff, Lead New Nuclear Build, Environment and Business, Environment Agency  
Dave Watson, GDA Head of Programme Management, HSE Nuclear Directorate

<http://www.hse.gov.uk/newreactors/presentations/alan-mcgoff.pdf>

### Overview of the two reactor designs

Larry Eisenstatt, Project Manager, Westinghouse

<http://www.hse.gov.uk/newreactors/presentations/keith-ardron.pdf>

Keith Ardron, AREVA UK Licensing Manager

<http://www.hse.gov.uk/newreactors/presentations/larry-eisenstatt.pdf>

### Our preliminary findings

#### What we're asking in our consultation and how to respond

Ian Streatfield, Manager, New Nuclear Permitting Team, Environment Agency

<http://www.hse.gov.uk/newreactors/presentations/ian-streatfield-findings.pdf>

## **The big picture - how it all fits together and the opportunities for being engaged**

Richard Marriott, Team Leader, Office for Nuclear Development, Department of Energy and Climate Change

<http://www.hse.gov.uk/newreactors/presentations/richard-marriott.pdf>

Ian Gambles, Director of Operations, Infrastructure Planning Commission

<http://www.hse.gov.uk/newreactors/presentations/ian-gambles.pdf>

## **Next steps for GDA and wider new build and site permitting**

Ian Streatfield, Manager, New Nuclear Permitting Team, Environment Agency

<http://www.hse.gov.uk/newreactors/presentations/ian-streatfield-next-steps.pdf>

## **Questions and comments generated throughout the day from the presentations**

### **Process – general, timing and resources**

- What exactly are the aims and objectives of GDA?
- Who decides the time frame for GDA regulators, industry, government?
- How can/will Requesting Parties/developers get enough confidence in the GDA/permit process to commit resources to actual construction?
- Will the regulators have enough staff and resources to do their job?
- Staffing capacity: Given the UK has not designed a reactor type since the AGR have EA/HSE got enough in house expertise to assess designs?
- Will GDA actually be completed in June 2011?
- How confident are you to meet the June 2011 deadline?
- Is June 2011 a fixed end point for GDA?
- What is the earliest point in GDA when regulators can give minded to consent/ reassurance to the IPC?
- What will be/how are we managing the impact of the new government's financial restriction on the public sector to ensure due priority is given to nuclear new build and decarbonising the energy supply?
  - Recruitment freezes – JPO, Phase 2
  - Infrastructure Planning Commission (IPC) abolished and Secretary of State involvement
  - Big concern/approvals – will this result in slippages in GDA and site specific approvals

### **Process - two agencies/joint working/governance**

- Why are there two agencies? One would be better?
- Is there a formal process for HSE to pass its findings on to EA for GDA? How is information shared?
- Is the GDA process on time within both HSE and EA? The need to be as complete as possible with minimal exemptions at the end.
- Two regulators are working together but there are at least five others – how take an integrated approach and who is responsible for driving?
- Generic design assessment works well with joint working of EA and HSE but how will this be dealt with in site specific permitting – feel there is a 'GAP' and need a third party independent body, (not EA as they have been too closely involved in GDA) to ensure capture local impacts at the sites when move to site specific.

- Concern is that it is not clear yet which authority will be responsible for permissioning (example: local authorities, the Infrastructure Planning Commission, marine management, EA issues). Also so far focus is on humans and not non-human species.

### **Process - management of GDA outcomes**

- How will Westinghouse address GDA Issues and when will they do this – by end of GDA or by issuing resolution plans?
- Does EA anticipate further issues to emerge before June 2011? And how will outstanding issues be resolved?
- How to deal with issues where regulatory requirements are pulling in 180 degree directions?
- What does DAC/GDA apply to – how define? How used by regulators later?
- If interim design is accepted what changes will be allowed, when and how will we know what they are?
- There are a number of fundamental outstanding issues relating to both designs eg handling of waste (disposal) - is the assessment premature? Can it reach a meaningful conclusion?
- Assurance that GDA is a meaningful process and outcomes are laudable, for instance 'issues' remaining at end of process can and will be tackled – the 'only if' scenario.
- Do the regulators expect to resolve all the issues before June 2011 and if not, how will open and outstanding issues be dealt with?
- Will the resolution plans be available to public?
- Are there resolution plans for each regulatory issue and timeframe? Will all be needed before we start construction?
- Does EA/HSE feel that the concerns raised can be overcome by June 2011?
- Will there be a resolution plan for each regulatory issue?
- Will all the above be resolved by construction and will they be available for public?

### **Process - overseas regulators**

- Has the EA considered the international implication of GDA with respect to assessment in Finland and France, not clear in GDA consultation document?
- Have you looked at and taken into consideration the regulatory assessments of these reactors designs in France, China, USA and Finland?
- Are EA and HSE learning from STUK (the Finnish regulator) over experience of Olkiluoto?
- Why are we assessing the designs when they are already in use in other countries and why don't we standardise on one to facilitate operation and decommissioning?
- Are the designs being looked at in the UK already in operation anywhere else in the world?
- Both designs are 'international' – why is it so hard for our regulator to clear the designs – are overseas regulators/assessments inferior?
- How have we linked/worked with international colleagues?
- How are we talking to international colleagues?

### **Design - general**

- What is the response from Westinghouse and Areva to the concerns/issues raised?
- What is the difference between the Flamanville and Olkiluoto EPRs?
- Why do reactors have such a limited lifespan?
- Is one design more passive than the other, if so how?
- Subsidiary question: will the two designs be compared today – as to which is best for UK?
- Where do you require double containment in the design of new nuclear power stations?

- Is there a variance between the two companies waste management arrangements and other aspects of the design?
- Once a design has been approved to what extent is this frozen – and what procedures are in place for the approval of subsequent changes?

## Design – waste/fuel

- Concern ref UK track record of ignoring problem of what to do with spent fuel ie final disposal rather than interim.
- Given the absence of a forward strategy for waste disposal, how can EA make judgements about management of waste? (eg key issue – spent fuel).
- Do any ‘new’ wastes arise from these designs?
- Uncertainty about centralised storage, local storage/treatment/encapsulation of waste or fuel. How do you involve communities near the sites or centralised facilities?
- Disposability of waste and spent fuel – not covered adequately in consultation/public domain. What are the options and timescales?
- Westinghouse design. Evidence required to demonstrate that the design uses BAT. For instance visibility required on the process that has been undertaken to optimise radioactive waste minimisation and management facilities.
- Concern with the whole waste management issue – GDA fails to consider adequately waste management – has no answers – relies on disposal/repository being available – not certain? The concept of a central store is new – what does this mean?
- How can R&D studies address the long term storage of spent fuel with high burn up? In other words how can we know with certainty what state high burn up fuel will be in, in 100 years before we give permission today for operation?
- CoRWM/recommended that new build waste be subjected to a separate process. This waste is of a different order, and should have its own safety case.
- Why the variance between the GDA design based on 100 years for storage of waste against a requirement for 160 years?
- High burn up fuel. Does the HSE/EA believe that this is an issue for either design in specific terms? This isn't a new problem – its generic to all PWR design and it already exists at Sizewell so why aren't we learning lessons now?
- Why have the regulators not been more helpful in assisting the requesting parties come to a conclusion on this matter?
- Integrity/lifetime of onsite store?
- Centralised store?
- The adequacy and responsibility for the existing low level waste storage (off site)? What is the NDAs responsibility? What is the capacity and suitability of storage space for the new build?
- Higher burn up fuel *may* require less uranium but will lead to more long lived, ‘hot’ radionuclides in spent fuel. How is this being addressed?
- More detail sought for GDA on long term management of fuel storage cycle with respect to storage periods, assumption and methods. Eg UK: AP1000 – 60 years. Sweden: AP1000 – 30 years. Relevance of different fuel types to models?
- What are the options for the storage of intermediate and high level waste, both onsite and offsite, and what are the most likely options? Why?
- Spent fuel – will any of the storage/disposal proposals mean that it could not be reprocessed in the future?
- Are we certain there will be a long term storage facility for spent fuel in the foreseeable future?

- Concerns due to lack of planned waste storage facility – how will we manage through permitting regime?
- Are regulators confident that they can deal with long term issues – climate change for example. There is an absence of a viable long term strategy for waste – how can regulators be satisfied. Are regulators asking the right questions?
- On site storage – is one design more advanced than the other in terms of identifying a solution?
- Works being taken forward on assumption of deep disposal facility. What if it is not developed? When does interim storage become permanent storage and how does the regulators assessment take account of that?
- DECC's waste and decommissioning proposals say they will take title to waste at point of decommissioning – does this make a national storage facility for waste (until GDF available) more likely?
- What is fallback if West Cumbria sites are not suitable for Geological Disposal Facility (GDF)?
- The assumption that the repository will take new build waste should be questioned. Any volunteer community would need to be clear that it would 'get' the new build waste.
- Question for DECC: can there be a credible timescale for progress towards a geological disposal facility please? If so what?
- How will volunteering communities for GDF of legacy wastes feel about accepting new wastes?
- What happens if it is decided that GDF is not feasible?
- Concerns about GDF and fall back for storage for lifetime of waste if GDF falls through.
- Is the GDA assessment for 60 years? Or to take to first review (RSA authorisation review) stage after 5 years?
- Has the use of mixed oxide (MOX) fuel been considered and how would this affect the wastes produced?
- What fuel used in each design?

### **Design - discharges and limits**

- Acceptability of having different limits for different designs. Shouldn't it be the same for all designs?
- How do the proposed discharges (to sea) from AP1000 and UK EPR fit with the UK commitment to 'close to zero' in OSPAR?
- From a radiological protection point of view, there is a need to balance onsite and offsite impacts (eg worker doses and rules vs. discharges)?
- Is there a set out methodology for dose assessment?
- Where can I find information on all radionuclides generated by these reactors?
- Is release of tritium from failed spent fuel assessed? Proportion?
- Are any reactors being built on estuaries? If not what are the implications for siting the reactors on an estuary?
- Are designers considering wider environment than just waste?
- Disappointed about the EA levels allowed for tritium in aqueous discharges on the GDA designs. Would like to see more justification on the levels allowed by designers/EA.
- Concerns about boron in the discharges from GDA process – may be different at site specific but cannot predict this now.
- Why are the discharge limits for each design different?
- EPR GDA – air quality section uses 50 microgram (SO<sub>2</sub>) and 40 microgram (NO<sub>2</sub>) for the environmental acceptable levels (EAL), are these short term as long term EAL are 30 microgram (NO<sub>x</sub>) and 20 microgram (SO<sub>x</sub>) – ie are EALs used correctly? (not human, health, environmental receptors).

- Are radiation health studies such as German KiKK report (and COMARE's eventual response) being incorporated into GDA process, particularly health concerns within 5 km of a reactor?
- How are the limits set?
  - Why different limits for different designs
  - OSPAR compatible
  - Dose assessment – what's included – what methodology – wider than humans?
  - Any estuaries?
  - Tritium a big issue
- Are Requesting Parties happy with the limits that have been set?
- How is environmental impact assessment linked to GDA assessment?
- Is there a normalising to compare environmental impact from the two reactors with varying power outputs?
- What are the implications on the acceptability of these designs for multi-reactor sites? ie in terms of overall (aggregating) emissions?
- Assessment of long term running of reactors.
- UK EPR GDA: para. 209. EDF could be asked to provide at least one illustrative example of the extent of tritium reduction based on a likely fuel management regime. Better still, they could be asked to provide a range.
- How are we assessing cumulative impact of new sites and existing sites? During GDA assessment.
- Addressing the carbon footprint of the entire lifecycle ought to have been considered. ie single reactor site vs dual/triple reactor sites with respect to construction phase impacts and optimisation. Is there a big picture question for GDA or National Policy Statement – it won't be picked up by current process with phase 2 being separate.
- How are claims regarding limits, (eg emissions) and calculations assessed by the regulators?
- AP1000, using filtration and costs. What is 'BAT' argument for not doing filtration?
- Are any BAT new? All tried and tested?

### **Design - decommissioning**

- Will decommissioning assessment look at reuse of materials?
- Will the GDA process capture decommissioning? If they do not address this in detail, will this mean the design is not totally accepted?
- Is it fair to push decommissioning issue onto regulatory parties when UK government is actually responsible for creating circumstances to all clear decommissioning strategy?
- More information requested by EA/HSE on decommissioning – is this just a UK issue or has it been looked at in other countries?
- To what extent has previous experience in radioactive waste management and decommissioning been taken into account? Also previous/current experience of major new infrastructure projects – nuclear plants previously built in the UK.

### **Design - security**

- Security and vulnerability to aircraft attack.
- What about guns, shells and rockets?
- UK EPR is designed to withstand the impact of a large commercial airliner. On what basis/evidence is this claim made?
- Nothing mentioned on aircraft impact for AP1000, unlike EPR – why not?
- Aircraft attacks protected against – but what about software/hacking attacks?

- Operation of nuclear power stations depends upon public acceptability. The latter will be shaken if there is a terrorist attack on a nuclear power station *anywhere* in the world – which is quite likely. Once there is such an attack, the media in the UK will be highly critical and will want to know how safe our power stations, (and associated radioactive material storage facilities) are against attack from land, air or sea. At the moment the government/site operators will *not* be able to point to the GDA for any such reassurance, despite OCNS being party to the GDA. Security considerations meant a discussion on this in the GDA is not easy but without this foundation there could be very serious risks to the operation of UK nuclear stations in the future, public/media debates before incidents are very different to ones afterwards – look at deep sea horizon experience!

### **Design - climate change proofing**

- Both designs: evidence to demonstrate that all climate change factors have been taken into account in design ie predicted elevated temperature, precipitation, tidal surge, sea level, etc. have the designs been climate proofed?

### **Stakeholder engagement/consultation**

- The vast majority of the public don't understand the proposals on the table at the moment, how will these issues be communicated to British citizens not living near the potential sites?
- Is a technical consultation a good way to raise public confidence?
- How far are EA going to capture consultation in rural areas where people don't have access to computers/e mails?
- What role is expected of the local authority in this consultation?
- Why don't HSE consult?
- How are HSE doing consultation – especially in relation to assessing and managing an accidental release? (worst case scenario planning)?
- EA are consulting on their 'preliminary' conclusions. As this is the last opportunity to comment is the EA being disingenuous?
- The consultation process appears 'closed' EA/HSE has access to information not available to those opposed to nuclear power. How can this be even handed?
- How does HSE and EA demonstrate independence from industry and government?
- What has been done to promote this consultation to the general public? And what more can be done?
- Comment – would prefer being lectured to, than a consultation.
- Good to see joint working of regulators but why only EA consulting?
- How can we demonstrate to the public that the process is open and robust?
- Welcome moves in approach and learning.
- No separate process of community engagement regarding the storage of spent fuel on site.
- What are the implications of government spending cuts on stakeholder engagement? eg permits?
- EA consultation – how do EA ensure they consult/give access to documents for rural locations where there is no email/internet available for locals?

### **Skills**

- What will happen to National Skills Academy for Nuclear and Cogent (Sector Skills Council) in relation to nuclear skills?
- How will the ability to develop/support experience/skills in UK workforce be assured before operation of sites?

## **Infrastructure Planning Commission (IPC)/Planning**

- When is the primary legislation around planning expected?
- Comment: the local authorities do not have enough resources.
- If the IPC are asking the local authorities to give planning consent before considering an application what value are they adding?
- Has IPC got enough resources for 42 projects, particularly the 4 new reactor sites?
- IPC last slide what are non-specified sites in Nuclear National Policy Statement?
- Local authorities will require the operators to assist with their funding a response to the IPC through a planning performance agreement. How can the local authority be seen as remaining independent in the spirit of openness fostered by IPC commitments.
- How will the IPC clarify its role in looking at waste storage on site in the short, medium and long term – ultimate disposal interface?
- What sort of status are the 42 IPC applications? In particular nuclear?
- Is the government confident that its energy policy and nuclear's place in it will be delivered through the IPC planning process (and its replacement). If not, what is plan B?
- What is the timescale for the 'initial assessment' step of the IPC process, and the overall timescale?
- What is the link between IPC and licensing/permitting – will it be a letter of comfort from regulators?
- How much scope is there for changes once Development Consent order (DCO) submitted eg if not got funded decommissioning programme approved – will IPC still proceed with decision on application? Need clarity for public to understand.
- Is public participation minimised by IPC process?
- What opportunity is there for the public to comment on IPC applications? How are people expected to find out about applications?
- How can the public be involved and influence the IPC process? Not clear from the process – what is scope for public input and timelines? Concern is that IPC can override public concerns in the national interest – great anxiety for public and change in culture to normal planning process.
- On what grounds will IPC make its decisions and recommendations?
- Which Secretary of State will decide the nuclear planning applications under the new regime?

## **Consultations on National Policy Statements and Justification /Department of Energy and Climate Change**

- The process described was formulated under the previous government. The UK has a new one! What are the implications?
- What happens if NPS are not designated?
- When will the NPS be put before parliament and what is the timetable for their designations?
- When are DECC going to finalise National Policy Statements and reach a decision on 'Regulatory Justification'?
- How long will 'no public subsidy' last?
- Is a floor price for carbon a subsidy for the consumer or public purse?
- Chris Huhne says 'we can knock up a gas fired station in 18 months' Greg Barker says we shouldn't rely on dirty gas? Which is correct?
- Democratic process. How do constituencies with a Lib Dem MP be represented on key parliamentary matters such as the National Policy Statement (NPS) when under the coalition agreement he cannot vote against it?

- Could DECC give actual details behind statement – it is progressing a decommissioning programme – what investment programme, what can we expect to see?
- Clarity and timescales would have been good from DECC ref: GDF/regulatory justification. Results from consultation (DECC)? Timescales: how long is government going to leave volunteer applications open for GDF? General timescales?
- Where does operator responsibility for spent fuel stop and taxpayer responsibility start?
- What happened to the Select Committee House of Commons Environment & Climate Change Committee? What happened to the evidence? Did it go anywhere?

### **Other issues raised and questions**

- What's been planned to cover public acceptability?
- Concerns about joined up thinking between National Grid and nuclear new build. Could be most critical step.
- Why no women giving presentations?
- When will the committee on medical radiation in the environment (COMARE) issue its report on the German KIKK report on cancer incidence around nuclear facilities?

## The key points recorded in each of the six break out groups

More detailed discussions took place in break out groups relating to reactor design and opportunities for stakeholder engagement as the process moves forward. Key points were recorded in each of the six break out sessions. Two each relate to the AP1000 submitted by Westinghouse, the UK EPR submitted by EDF and AREVA and stakeholder engagement processes within GDA and site permitting.

<b>Comments</b>	<b>Issues</b>	<b>Questions</b>
Westinghouse seems to be placing responsibility for waste management onto the operators	Size of cooling towers	How do you confirm spent fuel container integrity and check for leaks?
The strategic siting assessment (SSA) has an obscure calculation of demographics and the proximity of station to local populations	GDA done on basis of one reactor per site, may have multiple reactors on a site	What will be done with broken fuel elements?
Several statements in plenary about BAT and benchmarking with overseas reactors. We should be better than average	Institutional stability and survival seem to be assumed for hundreds of years	Are AP1000 fuels reprocessible?
	We are taking for granted that we can pass the waste burden onto future generations and assuming they have the competence to deal with it	How long will fuel stores need to last?
	There seems to be no acknowledgement of uncertainties in data, models or scenarios	How can we secure sites in the face of climate change and coastal erosion? This is a big ask on future operations
		Is it Westinghouse or the operator who designs the waste management facilities?
		Hydrazine used at start up of AP1000 - have you done a suitable assessment of impact from un-ionised ammonia? This is an issue for estuarine waters. Have the EA reviewed the current environmental quality standard for un-ionised ammonia?
		What are the regulators doing to assess the adequacy of arrangements in the event of accidents and emergencies?
		What will be handed over from Westinghouse to the operator?
		Will Westinghouse guarantee their reactors?

**Table: B. EDF and AREVA, UK EPR**

Comments	Issues	Questions
Current GDA is looking at new fuel – not reprocessing – not on table for GDA process	GDA will need research to look at fuel disposal/re-processing and storage longer term	Clear at present no re-processing of spent fuel, (current government), policy, but in the future – 10/15 years – are we preventing this by going for interim storage/long term storage? Spent fuel from EPR more difficult to reprocess in future
Like to see information/evidence behind conclusions on accident scenarios. Useful to have details of the source term used for the scenarios.	Need to explain difference between 100 and 160 year storage of fuel. Robustness of science of storage	Why is GDA not considering accidental releases (EA)? Accident scenarios. Confusion as this may be considered by HSE and GDA is supposed to be joint working. Also need to consider impacts on humans and environment
Need some validation of data. GDA gives predictions but we must have some data on current/existing sites that could be used in the validation. Data may not be available for this	Concerns that nobody is looking at accumulative effect of more than one reactor or existing site(s) within similar locations and effect on human/non humans for this (eg new build site next to existing site)  GDA only looks at one reactor on one site there will be multiple reactors as well as operational / decommissioned reactors on same site	The footprint of the site will impact on non human biota. Will this be captured in GDA or is it site specific?
GDA looking at one reactor to five limits. If have two reactors we may not necessarily double the limits – not looked at this – this will be dealt with at site specific	In order to close down monitoring we could need details of equipment – we are leaving this till nearer the time when becomes operational as maybe 5+ years in future (site specific issue)  Methods and equipment	Can we check this in detail? Also, Lithium 7 – check this
Proposed tables for reactors - iodine mentioned in EPR but not AP1000		
HSE not following the consultation process as EA even though working jointly on GDA (another difference)		

<b>Table: C. Stakeholder Engagement</b>		
<b>Comments</b>	<b>Issues</b>	<b>Questions</b>
It is important/clear about what EA hope to attain from consultation	National issue – GDA. Involve those further away eg Birmingham city	Is it an open consultation? Are you looking to involve stakeholders further away +25 miles
Arriving at optimum design	Consultation fatigue – striking a balance	Does EA do social media/digital/ Facebook/Twitter/RSS feed?
Ask people what they are worried about	NB – local democracy – councillors not always representative of local community  But local councillors have feeling of issues in community	Limits - Reactors have different limits - Are we setting right limits  Are we asking the right questions in our consultation?
People based DECC event/leaflet didn't work (old fashioned)	Budget – now very restricted – working together more cost effective	
What worked (company) - Well organised - Concerned about people - Public meetings in small communities worked - Company took advice from local authority etc.	SSGs aren't working	
Social media – can't ignore	Consultation in isolation, need more context 'history' Get context right for GDA What do limits really mean?	
More cost effective	IChemE - network – use to communicate/engage  Plain English – less technical documents for less informed	
CoRWM – consultation very good eg schools/colleges outreach		
Power company - Ongoing face to face communication – engagement - Should we do this in joint fora?		-
Energy institute - Role to play - Speak at events/forum		

<b>Table: D. Westinghouse AP1000</b>		
<b>Comments</b>	<b>Issues</b>	<b>Questions</b>
GDA report on Westinghouse management systems	Transfer to UK without loss of quality	How is this achieved?
Cooling water abstraction and return	Impact on local environment	How does GDA fit with the very much local consideration of water abstraction and return?
There are physical steps needed to maintain the safety case for 60+ years	How does operational experience feed back into designs still with a valid GDA 'acceptability'?	How does the GDA address this?
Knowledge transfer is essential between vendor/designer and operator	The different parties may be on different continents	How does GDA make this link and ensure it is fed into site permitting?

<b>Table: E. UK EPR, EDF and AREVA</b>		
<b>Comments</b>	<b>Issues</b>	<b>Questions</b>
Spent fuel – issue for government through geological disposal facility, rather than vendors/operators – GDA needs appropriate funding	Should spent fuel be designated as 'waste' straight away?	Are designs deemed as 'BAT' or is there flexibility for operators?
Will spent fuel/LLW stay on site for lifetime or be moved elsewhere?	Water abstraction (estuary) being 'parked' – will be a big issue at Oldbury	Have we assessed all techniques for LLW processing or just at 'principle' level?
Spent fuel storage up to 160 years – not much assessment of ongoing integrity/fuel store	No alarms on secondary sumps	Low level waste repository nearly full – has this been taken into consideration?
Good that thinking about lots of alternative routes for low level waste		Is DECC waste base case permissible?
No reference to technical competence of EDF/AREVA under 'management systems'		Do operators have sufficient manpower/resources to operate?
What will happen between end of GDA and start of construction (operators resources and structures)		Have management systems for Finnish reactor been looked at, (in relation to delays etc.)
		Does assessment of management systems include data management for lifetime of operator?
		Are we sure waste facilities will be operable (big enough for people etc.)
		Has effect of abstraction on fish etc been considered? (screening requirements for eel regulations)
		Does GDA include monitoring of effects of thermal impact of discharges on fish? (migratory, estuarine species eg lamprey/smelts)

**Table: E. UK EPR, EDF and AREVA**

Comments	Issues	Questions
		Are there any monitoring points for groundwater (check not contaminated)
		Will construction excavation materials be retained on site for later landscaping?

**Table: F. Stakeholder Engagement**

Comments	Issues	Questions
<ul style="list-style-type: none"> <li>- Signed up for e-consultations</li> <li>- Monthly e-bulletin</li> <li>- NGO seminar</li> <li>- Via email</li> <li>- Various groups</li> <li>- Many too many – invite feedback like SSGs</li> <li>- Work with community</li> <li>- Passionate stakeholders will engage</li> <li>- Simplified summary</li> <li>- Sizewell SSG don't discuss new build</li> <li>- Forums and media mix required</li> <li>- Independent consultants to summarise</li> <li>- Make better use of what we have</li> <li>- Use media for communities, newspaper articles</li> <li>- Local press</li> <li>- Leaflet dropping (key)</li> <li>- Run site specific events</li> <li>- Important to publish feedback</li> <li>- Local meetings GDA/site</li> <li>- Posters – some sites too rural</li> <li>- Community notice boards</li> <li>- Doctors surgeries</li> <li>- Link to other organisation publications, council etc. sponsors</li> <li>- Social media</li> </ul>	<ul style="list-style-type: none"> <li>- How do we reach those with no email?</li> <li>- Difficult to follow. One stop shop</li> <li>- Technical documents – not engaging with general public</li> <li>- Presentations too high level need better explanation to technical aspects</li> <li>- Technical resources</li> <li>- Need to enable NGO to attend events, help with costs to attend</li> <li>- Sizewell SSG don't discuss new build – missed opportunity</li> <li>- Employ committed brokers, need to keep up to date with knowledge of stakeholders</li> <li>- Communities – no internet access!</li> <li>- Documents overwhelming</li> <li>- Information needs to be accessible</li> <li>- Funding</li> <li>- Local difficulties</li> <li>- Level of information in documents disappointing, not reflecting what people want to know</li> <li>- Media angle/agenda</li> <li>- Oldbury not coastal site</li> <li>- Gap in information in communities</li> <li>- Timescales for permitting short (consultation)</li> </ul>	<ul style="list-style-type: none"> <li>- Will we run site specific events/consultation</li> <li>- Which consultations will be conducted by June 2011?</li> <li>- Has anyone evaluated NPS consultation to learn from what worked/didn't work?</li> <li>- Can we resource site, will we have local interest?</li> <li>- Will what is in engagement document be delivered due to government ban on spending?</li> <li>- How will public know what is what ie biased council publications, not all information</li> </ul>

## Questions put to our question time panel

The questions generated from the responses to the presentations and the break out groups were themed and collated during the day. The question themes that recurred most often were then presented to a panel of all the speakers from the day during the final session of the seminar.

### Stakeholder engagement

- How will the EA reach out beyond informed stakeholders to consult the wider public on these technical issues and provide meaningful information?

### Waste

- Given the absence of a forward strategy for waste disposal how can the EA make judgements about the management of waste?

### Overseas regulation

- These are international designs, why not use other assessments that have authorised the designs?

### Process

- Given the number of outstanding issues how can a meaningful outcome be achieved by 2011? How are RPs addressing issues raised?
- Does the EA anticipate other issues emerging before June 2011? eg from the consultation and further assessment?
- Who dictates the timeframe for GDA – regulators, industry, government?
- Resources – will it be completed by 2011?

### Decommissioning

- Will the GDA process capture decommissioning? If not addressed in detail will that mean the design is not totally accepted?

### Aircraft/missiles

- How do the EA assess the impact of aircraft, missiles etc. what is the evidence to back up the RPs claims?

### Discharge and limits

- How are the limits set?
  - Why different limits for different designs?
  - OSPAR consistency?
  - Dose assessment – what's included? What methodology – wider than humans?
  - Any estuaries – impacts?
  - Tritium is a big issue

### Monitoring

- How are the effects of abstraction and thermal impact being assessed under GDA?

### Joint working

- Why are two regulators involved in GDA?
- How will joint working between EA and HSE be developed into phase 2?

### IPC

- Timescales – lots of projects will timescales be met?

- Resources for engagement for local authorities? - if local authority engagement is very important.
- What is the earliest point at which the regulators could give IPC comfort that designs were acceptable?