



**REPORT TO
DEPARTMENT OF ENERGY AND
CLIMATE CHANGE (DECC)**

**ON THE COMMERCIAL INSURABILITY OF THE
INCREASED LIABILITIES FOLLOWING
IMPLEMENTATION OF THE PARIS AND BRUSSELS
CONVENTIONS IN THE UK**

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EXECUTIVE SUMMARY

- 1 The UK is in the process of implementing into UK law the changes made to the Paris Convention on nuclear third party liability and the Brussels Supplementary Convention (“the Conventions”).
- 2 The Conventions upgrade the existing regime and are intended to ensure that, in the event of a nuclear incident, an increased amount of compensation is available to a larger number of claimants in respect of a broader range of damage than is currently the case. The changes will effectively transfer contingent liability which would otherwise rest with Government to the nuclear operators.
- 3 A key legal requirement of the liability regime is for operators to have the necessary insurance or other financial security to cover their liabilities.
- 4 The UK Government published a consultation on its proposals to implement the Conventions¹ earlier this year in which it set out its understanding of the availability of traditional nuclear insurance cover for the new liabilities. The consultation document noted that the traditional nuclear insurer was not able to provide the full liability cover from the start of the new regime and that operators would need to find alternative financial security solutions.
- 5 To help inform operators the Government commissioned INDECS to review the current state of the insurance market to assess the extent to which insurance or alternative sources of financial security could be available to address the gaps in operators’ liability.

Key Findings

- 6 Our key findings are:
 - (a) The commercial casualty² insurance market sees the increase in nuclear operator liability as a potentially attractive opportunity.
 - (b) The nuclear insurance pools and the mutual insurance companies around Europe are positioning themselves to respond to the changes to the Paris and Brussels frameworks, and are in various stages of developing products which are intended to provide coverage to companies across the sector for the new liability regime. It is likely that they will be able to provide most but not all of the cover necessary from the start of the new regime

¹ Implementation of changes to the Paris and Brussels Conventions on nuclear third party liability: A Public Consultation Reference 10D/974 24 January 2011

http://www.decc.gov.uk/en/content/cms/consultations/paris_brussels/paris_brussels.aspx

² Casualty is the generic description of the various third party liability products offered by the international insurance market.



(c) the financial increases under the revised Conventions do not pose any significant challenge to the insurance market, and over time the market will be able to provide commercial insurance for the whole liability framework. The short term (next 2-3 years) difficulty may apply to two specific areas:

- personal injury after 10 years up to 30 years, and
- damage caused by authorised discharges³.

This problem is not confined to the UK- other Paris countries face similar difficulties.

(d) The main reason that mutual and commercial insurers are unable to provide full cover immediately is that the new Solvency II capital requirements mean that it is difficult to allocate capital:

- across the longer liability period for personal injury, and
- for authorised discharges which are not seen as unforeseen events.

(e) Given this it is likely that Government will need to have a solution ready for a limited period (at the start of the regime) to provide selective liability cover for a market-based charge. Failure to intervene would either mean that the UK cannot implement the revised Conventions or not be able to fully transfer the new liabilities onto the operators. Neither option is attractive.

Key Recommendations and next steps

- 7 Government should announce as soon as possible the maximum scope of its intervention in relation to nuclear third party liability insurance. This should be limited to cover only: (a) personal injury 10-30 years; and (b) authorised discharges for a limited period – less than 3 years after the revised legislation comes into force.
- 8 Government should begin work to structure a temporary (2 years) reinsurance product which provides commercially priced reinsurance to direct insurers for the gaps, using market pricing mechanisms. Initial assessment suggests that reinsurance is possibly the best way for Government to provide the cover.
- 9 The pricing should reflect the risk Government is taking on and be set at a premium level which will attract the market to enter as quickly as possible.



PURPOSE

The purpose of this report is to undertake a review of the current position of the insurance market in relation to providing nuclear third party liability cover and to establish whether there is a need for Government to intervene in the provision of insurance to cover the new liabilities imposed by the changes to the Paris and Brussels Convention.

To do that we have:

- (a) Appraised the current nuclear and non-nuclear specific commercial casualty markets for the provision of insurance products;
- (b) Considered how this market may develop in the short medium and long term;
- (c) Considered how operators across all sectors are proposing to respond to the challenges of the revised Conventions; and
- (d) On this basis provided some recommendations covering how the international market, Government and operators may wish to respond.

METHODOLOGY

In order to secure robust information, and ensure that responses were subject to scrutiny, a wide range of information sources and a stringent process were developed.

Stage One

Hold discussions with many of the officers in a broad cross section of the key operators, who were responsible for risk management strategy. Seek their views on current arrangements, how Paris and Brussels would change the landscape from their perspective, sense their risk retention capabilities and discuss options going forward.

Stage Two

Hold discussions with representatives of the Nuclear insurance pools in the UK and Europe to test their perceptions of the products they were offering and how advanced they were in evolving these products to meet the new regulations.

Stage Three

Hold discussions with Insurance Brokers (insurance intermediaries and market experts) to obtain a sense of how quickly the market is moving and will move in future to adapt to the new regime, and whether there may be untapped parts of the market which may be interested in participating in providing the additional insurance required.

Stage Four

Hold discussions with key senior insurance underwriters in the major international insurance syndicates and companies (who generally provide casualty insurance products to high risk industries), to see if there was an appetite to add nuclear liability to their portfolios.

Stage Five

Hold discussions with representatives of the capital markets to get a flavour of whether there may be financial alternatives to insurance which could be workable in the context of the new legislation.



We also held discussions with overseas markets in order to try to find out if other Paris and Brussels countries were facing similar challenges. The commercial insurance market is a global marketplace and the consensus conclusion was that all of the countries were facing similar issues.

All of the discussions were held in confidence, whilst assertions and assumptions were challenged and cross referenced with feedback from other sources. The general feedback was remarkably consistent and the conclusions reached are articulated in this report.

The insurance market is notably volatile and dynamic. It is vulnerable to all kinds of local or global events such as natural catastrophes, financial upheavals, and political and social turbulence. The advice provided herein is reflective of market sentiment at the date of the report, and unfortunately cannot be locked in for the medium or long term. The findings would be particularly sensitive to a significant nuclear incident before or during implementation of the new regime.

BACKGROUND

The UK liability regime now and in the future

- 1 The current Paris and Brussels Conventions are implemented in the UK by the Nuclear Installations Act 1965 (as amended) (“the 1965 Act”). This legislation establishes both a licensing regime for the operation of nuclear installations and a third party liability regime. In establishing the third party liability regime, the 1965 Act maintains the principles of the Conventions including, for example, that the liabilities are channelled to the operator, are strict liabilities, are capped in amount and limited in time; furthermore the 1965 Act provides for financial security from operators. These principles are unique to the nuclear industry.
- 2 The liability regime currently applies to all companies which are nuclear site licensees. Nuclear site licensees can be sub-categorised in terms of:
 - **Standard sites** - such as power stations and reprocessing plants, which are subject to the full liability level. In the UK the current level of liability for these sites is £140m per incident; and
 - **Low risk sites** - the criteria for which are set out in the Nuclear Installations (Prescribed Sites) Regulations 1983 (the Prescribed Sites regulations) - which in the UK have a current liability level of £10m.
 - The liability regime also applies to the **transport** of nuclear materials by these operators.

At present operators hold 31 civil nuclear site licences of which 18 are with the Nuclear Decommissioning Authority (NDA) which is a Government body.



The Conventions were revised in 2004 and the changes fall into three main areas: categories (heads) of damage, geographical scope and financial liability levels. They will apply as now to all existing nuclear licensed sites but will also now cover facilities for the disposal of low level nuclear waste. A table setting out what the operators are liable for now and what they will be after the changes to the Conventions are brought into force is set out below but in summary:

Under current regime, operator liable for:

- i. Total of £140m in compensation per incident;
- ii. Covering
 - property damage; and
 - personal injury during first 10 years after the incident
- iii. Damage caused in the UK and other Paris States

Above this amount the liability rests with Government up to at least £300m (under the Conventions) but the likelihood is that it would pay out significantly more for a much broader set of damages and costs.

Once the revised Conventions have been implemented in the UK Operator liability will significantly increase to €1200m in compensation per incident (this will be introduced progressively starting at €700m at the start of the new regime and increasing €100m annually). It will cover;

- property damage;
- personal injury up to 30 years;
- economic loss from property damage and personal injury;
- cost of measures of reinstatement of the environment;
- loss of income deriving from a direct economic interest in any use or enjoyment of the environment; and
- the cost of preventive measures;
- Damage caused in the UK, other Paris States, non-nuclear countries and others with reciprocal arrangements.

Liability of nuclear operators globally is regulated by a number of clear rules and principles which the commercial insurance market views favourably, and these will not change:

- All third party liability resting with operator without question (strict liability);
- Operators unable to pass that liability to contractors or other commercial parties;
- Operator's liabilities to be limited by its government to a fixed financial amount;
- Operator's liability to be limited by its government to a fixed amount of time post loss;
- Operator to comply with mandatory requirements to finance liabilities.



Summary of the position pre post 2004 Paris/Brussels Conventions

Current as implemented in the Nuclear Installations Act 1965

Amended Paris/Brussels Conventions

Financial limits (on operator)

- £140m (standard site)
- £10m (for low risk "prescribed" sites)
- Incidents in transit £140m from standard sites; and £10m from prescribed sites

- Minimum €700m (standard site)
- Minimum €70m (low risk installations)
- Minimum €80m for low risk transit

(above this level the government and other Convention signatories provide additional cover, under the Brussels Convention, of up to 300m Special Drawing Rights (approximately £300m))

(above this level the government and other Convention signatories provide additional cover, under the Brussels Convention, up to €1,500m)

Categories of damage

1. Property damage
2. Personal injury/death

1. Property damage
2. Personal injury/death

New

3. Economic loss arising from property damage or personal injury
4. Cost of measures of reinstatement of impaired environment
5. Loss of income deriving from a direct economic interest in any use or enjoyment of the environment
6. Cost of preventive measures

Time limits

- Operator limitation period for property damage and personal injury claims is 10 years. But Government has discretion to cover claims made between 10 and 30 years after an event

- Operator limitation period for personal injury/loss of life increased to up to 30 years.
- Operator limitation period for all other types of claims remains at 10 years

Geographical scope

- Does not cover injury or damage in any countries that are not a party to the Convention

- UK
- Other Paris/Brussels signatory states
- Non-nuclear states e.g. Austria, Ireland, and Luxembourg that are not a party to the Convention
- Vienna Convention countries who have ratified the Joint Protocol (if the UK has ratified the Joint Protocol)
- Any other country not party to the Convention but that has reciprocal arrangements



Existing Arrangements for Insurance

The UK nuclear industry has traditionally used three main sources of insurance/financial security to cover its third party liabilities namely:

- (a) Insurance from the UK nuclear pool managed through the Nuclear Risk Insurers Ltd (NRI);
- (b) Insurance from their own “captive” insurance companies (wholly owned subsidiary insurance companies); and/or
- (c) Insurance provided through membership of mutual arrangements with other nuclear operators where the risks are shared (mutual insurers).

It is likely that solutions to cover the new liabilities will continue to be dominated by these three sources. This is not surprising since it is likely most of the new liabilities will be able to be covered by these sources from the first day of the new regime.

Of the existing three sources, insurance provided by the NRI represents the largest proportion of total cover for nuclear liabilities in the UK, followed by the use of captives and then mutuals. It is likely that future solutions might be comprised of substantially different proportions of each with the use of mutuals taking a much more prominent share.

Furthermore we believe that there is likely to be interest from the international casualty insurance market; which has traditionally stayed away from nuclear liabilities but may see opportunities with the development of the new nuclear plants. At this stage it is not clear whether they will provide any cover independently of the nuclear insurance pools.

Main Options going forward

Discussions with various participants in the insurance market indicate that the financial increases under the revised Conventions do not pose any significant challenge, and over time the market will be able to provide commercial insurance for the whole liability framework. The short to medium term difficulty will apply to two specific heads of liability – personal injury between 10 years and 30 years, and authorised discharges (the “Gaps”). From discussions we have had with overseas operators, similar short term difficulties are being faced by their pools and commercial insurance markets.

It is important to emphasise at this stage that increases in financial amounts of liability do not usually and should not equate to pro rata increases in insurance cost. Insurers’ cost of capital to provide the new limits will increase, however as a general rule at higher levels of attachment, reinsurance is very competitive and becomes cheaper to procure. Nevertheless an increase from £140million to Euro1,200million is significant, and with widening heads of cover as well, the larger installation operators in particular will be facing significant increases in insurance costs. Other operators faced with increased liabilities will also face increased insurance costs. At this stage it has not been possible to persuade insurers to provide estimates of insurance cost increases even in very rough terms.



Potential Scope and Requirements

The various nuclear pools and the mutual insurance companies are positioning themselves to respond to the changes to the Paris and Brussels frameworks, and are in various stages of developing products which are intended to provide coverage to companies across the sector for the new liability regime. In discussions INDECS has held with organisations in various markets, it is clear that on implementation of Paris and Brussels the only heads of damage which will not be immediately insurable will be personal injury from 10 to 30 years and authorised discharges. The main reason that mutual and commercial insurers are unable to provide this immediately, is that the new Solvency II capital requirements mean that it is difficult to allocate capital under the new regulations:

- (a) across the longer liability period for personal injury, and
- (b) for authorised discharges which are not seen as unforeseen events.

Solvency II is a newly developed set of capital adequacy rules for European insurance providers. Insurers are required to undertake detailed assessments of overall expected aggregate demands on their capital over extended periods to ensure that they maintain levels of solvency significantly in excess of these demands. Maintaining long term solvency against future liabilities covering many decades is complex and difficult to implement. Risk capital in insurance companies is efficient to price and allocate provided the events are unpredictable. Where the events are predictable (e.g. authorised discharges) capital allocation becomes cost plus and not only does it not fit the insurance model, it is extremely inefficient.

In addition to the Solvency II issue, insurance providers find it very difficult to account effectively for future third party liabilities. Nevertheless they are able to make reasonably reliable provisions, provided the risks they insure are in essence unpredictable and provided they don't have to look too far into the future.

The European mutual insurance company ELINI (which was formed in 2004 to specifically underwrite (on a mutual basis) nuclear third party liability risks in Europe) has, in the last few months, formed a capitalised reinsurance company (Blue Re) which is intended to enable ELINI to offer all nuclear entities in Europe fully compliant cover over all heads of damages. This means that in the short term, ELINI will have additional capacity to insure the full wider/longer liabilities. Nevertheless ELINI advise that they will not have sufficient capacity to provide full coverage for the higher limits immediately, but they have an objective over time to provide the higher limits as well.

Detailed Review

Nuclear Risk Insurers (NRI)

NRI has traditionally provided integrated property and casualty insurance (i.e. a single insurance policy covering damage to first party property and liabilities for injuries and property damage to third parties) for the nuclear industry by managing the UK nuclear insurance market pool. It has indicated that as an insurer pool it will be prepared to respond to the new framework, and cover the new limits (both the interim limit of €700m



and the ultimate limit of €1,200m). In the short term however, cover for personal injury from 10 to 30 years and unauthorised discharges remain a problem for NRI partly because of the capital adequacy rules imposed by Solvency II. Although, NRI expect to resolve these issues in the next few years, NRI recognises that the weighting of their integrated insurance product which historically was dominated by first party property damage with associated casualty coverage, will necessarily change to becoming primarily casualty with associated first party property damage coverage.

Strengths <ul style="list-style-type: none"> • Experience with the sector • Technical knowledge and competence • Continuity • Financial strength 	Weaknesses <ul style="list-style-type: none"> • Rigid • Inflexible • Expensive
Opportunities <ul style="list-style-type: none"> • Mix NRI with blended other solutions • NRI to move to more casualty than property underwriting. • Industry can use NRI to provide wider risk management support via engineering and technical competence. 	Threats <ul style="list-style-type: none"> • NRI may seek to dominate market and reduce choice • Costing may prove excessive with ultimate burden being transferred to customers.

Mutual: European Liability Insurance for Nuclear Installations (ELINI)

ELINI is mutually owned by over 20 nuclear operators inside and (despite its name) outside Europe (details of members can be found at <http://www.elini.net/>). It was established in 2004, and has recently incorporated a substantially capitalised reinsurance vehicle (Blue Re). It is positioning itself to be able to provide an insurance product across all of the new heads of damage required by Paris and Brussels. ELINI indicates that it will not have sufficient capacity to provide the full limits of liability €700m rising to €1,200m immediately. ELINI has firm intentions to build the required capacity in a period of 2 to 5 years by securing catastrophe reinsurance in the global reinsurance marketplace and building capital from existing and potential new members. As a company incorporated in Belgium it is not regulated by the UK Financial Services Authority (FSA), but is regulated by the Belgian equivalent, and as such UK companies can assure themselves that it is subject to similar regulatory tests to those employed by the FSA ref: European Parliament and Council Directive 95/26/EC of 29 June 1995

For some operators, ELINI provides an elegant solution for partial compliance with Paris and Brussels, in particular because membership is open to all types of nuclear operators regulated by the framework, and is open to UK operators. However it is not a universal solution nor is it desirable for all for a number of reasons.

- Membership of mutual organisations is a long term commitment, and it may be difficult or very expensive to withdraw for whatever reason.
- Mutualising risk needs to be considered carefully, and members must have confidence that their peers have similar risk profiles and standards as themselves, otherwise there will be an inefficiency arising from better or bigger members subsidising others.



- Joining a mutual in the early stage of establishment carries disproportionate risk of failure, since the critical mass of capital, experience and operational efficiency has not yet been accumulated.
- Germany's and Switzerland's decisions to discontinue nuclear energy generation will shrink the pool in the short term.

Therefore the conclusion is that ELINI will be attractive to some, but should only be considered as part of the overall solution.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Wider coverage • Risk pooling with peers in same industry • Simple processes • No profit 	<ul style="list-style-type: none"> • Rigid • Inflexible • Early stage of implementation • Cannot provide full limits
Opportunities	Threats
<ul style="list-style-type: none"> • May be attractive to larger operators. • Some operators already members via European affiliates 	<ul style="list-style-type: none"> • Difficult to withdraw • Vulnerable to early claims before capital base established.

Captive insurance companies

Most large, internationally diverse conglomerates will utilise a captive insurer (a wholly owned subsidiary insurance company) as part of their philosophy for centralising and managing insurable risk. The extent and sophistication of such arrangements depends on many factors, with some captive insurers being capitalised to several billion Euro and having a Standard and Poors credit rating of A- or better (although the rating will be linked to the parent company rating). Smaller national companies may have captives, albeit not highly capitalised or independently credit rated. The use of captive insurers needs to be considered as part of the overall solution, providing capacity and competition to the commercial market and nuclear insurers.

Our experience of most captive insurers is that the parent company is unwilling to utilise them for long tail liabilities, as this results in long and burdensome management of claims draining the balance sheet over many years. This can also be seen as an indication of the willingness (or otherwise) of the operators to retain and fund the exposure on the balance sheet. Captives generally must act in the same way as market insurers, and would therefore be subject to the same short term solvency and capital constraints.

Irrespective of this, the captive insurer is a very effective mechanism for a company in centralising non related exposures from multiple jurisdictions. The commonality across multiple jurisdictions of the implementation of many elements of the Paris/Brussels Conventions makes this particularly attractive and attainable.

From our discussions with operators who have captive insurance companies, they certainly see the use of captives as part of the solution, which may assist in creating a commercial market for the less commercially attractive elements of the liability regime.



Captives add flexibility to the overall solution but are not a sine qua non. Clearly, operators without a captive will not have this option.

Strengths <ul style="list-style-type: none"> • Efficient risk ownership • Full control of risk and process • Financial efficiency • Cost effective 	Weaknesses <ul style="list-style-type: none"> • Lack of risk transfer • Capital intensive • Poor vehicle for long tail risk management • Credit rating may not be available
Opportunities <ul style="list-style-type: none"> • Part of blended solution • May allow insurance purchase at higher attachment points 	Threats <ul style="list-style-type: none"> • Too much risk retention • Long term cover will lock in captive structure and make it difficult to change.

International Casualty Insurance Market

Outside the traditional nuclear insurance market, we have also reviewed the international casualty insurance market (insurers of third party liability risks) to assess whether this market may participate in providing some component of the required insurance cover under the new regime.

Elements of the casualty market exist for, and thrive on, insuring higher risk industries against complex and ever changing statutory and legal regimes. In contrast, the rigid and robust limitation framework of the nuclear industry, despite its obvious catastrophic potential, is very attractive to these insurers.

The casualty market is relatively stable, although unanticipated casualty losses, (such as asbestos, gradual pollution of drinking water aquifers, systematic car tyre failures) have caused restructuring and product revision, resulting in the insurance market and buyers of insurance occasionally being out of step in terms of expectation and coverage. Over time however, both sides adjust their business models and the business expectations align.

In discussions INDECS has held with various casualty underwriters, there is an appetite to continue to diversify the portfolio of hazardous industries they underwrite. Adding nuclear liability risk (which is clearly defined, limited in scope and amount, well operated and potentially profitable over the long term) is something which would be attractive to them. However, it should not however be concluded that the commercial market is ready to pick up all of the increased liability heads of claim for all participants. It is expected that the potential shortfalls in coverage will be consistent with NRI (personal injury for 10 to 30 years and authorised discharges) because they are subject to the same Solvency II requirements and constraints, at least in the short term.

Large industrial/chemical and other dangerous industries (apart from shipping and aviation) do not operate under regulated and limited liability regimes, and are unable to clearly measure (either in time or amount) the impact of their liabilities. When the BP Macondo control of well event occurred in 2010, BP had no idea how much liability it would incur, how widely it would spread and how long it would last. There were attempts by Congressmen and Senators to change the liability regime post loss, and a US Government effectively imposed unlimited and strict financial obligations on BP following the loss.



In contrast, the Nuclear industry has its liability exposures clearly defined and limited, even if the limits will increase the limitations continue to provide certainty and measurability of exposure. These attributes make nuclear business attractive to commercial casualty underwriters.

Strengths <ul style="list-style-type: none"> • Financial strength • Underwriting capability • Risk pricing discipline 	Weaknesses <ul style="list-style-type: none"> • Complex processes • Volatility of market
Opportunities <ul style="list-style-type: none"> • A new market which will introduce competition. • May be seen as part of blended solution 	Threats <ul style="list-style-type: none"> • Lack of longevity • Opportunism

Other sources of cover?

In order to ensure financial security, we are limited to looking at the more stable and financially strong institutions. We have focused our review therefore on four sources of cover only namely – traditional nuclear insurance, captive insurance, mutuals and the wider commercial insurance market. In our opinion, these represent the best four options in terms of availability, value for money, robustness etc. However there are other possible solutions which operators could also consider such as parent company guarantees, bank credits, catastrophe bonds etc.

The financially secure market (Standard and Poors A- or better) will currently only insure pure unforeseen catastrophe type losses, and recent regulatory changes to the insurance market under Solvency II also points to a more stable insurance market, which will have the financial security, technical capability, and available capital to really add value to the nuclear energy industry under the new regime, whilst over time expand to provide wider and longer coverage.

Typically when businesses are unable to trade significant risks with the insurance market and are uncomfortable retaining them, they try to seek solutions either in the capital markets, or with opportunistic insurance carriers (typically represented by Warren Buffet’s insurance vehicle, Berkshire-Hathaway). Both the capital market and Berkshire Hathaway are receptive, however the capital markets have a high cost of capital and they put a very high price on uncertainty. Whether one seeks pricing indications from the capital markets or Berkshire-Hathaway, the usual price range varies from between 8% and 12 % of the limit purchased, which is very high for catastrophic industrial losses (which may be considered to be a one in two hundred year event).



Rationale for Government Intervention

Operators are actively seeking alternatives to cover the Gaps that currently exist in the traditional insurance market, and they will continue to find solutions up to the moment that the legislation comes into force. The nuclear and casualty insurance market is also positioning itself to provide solutions over the medium to long term. However, Government cannot bring the legislation into force on the hope that a full solution will materialise. There needs to be certainty that products will be available – Government and operators need this certainty, in order to ensure operators will not fall foul of the legislative requirement to have insurance and/or other financial security in place when the legislation is brought into force. But importantly, potential victims also need to be assured that compensation claims will be met.

Any Government intervention needs to be considered in context:

- (a) The revised Conventions when implemented in the UK will effectively transfer a significant amount of liability from Government to the nuclear operator. It will increase operators' liability from a cap of £140m to €1200m and will broaden the types of damage and geographical scope for which they will have to pay;
- (b) Most of the new liabilities can be insured by the commercial market from day one;
- (c) 18 of the 31 (20, if one counts Urenco) civil nuclear sites are already currently in public ownership and their liabilities rest with Government.
- (d) If the market is unwilling to provide full cover at the start of the regime and the Government also decides not to provide a short term insurance solution (for which it can charge) the choice will be limited to one of the following policy options:
 - (i) Do not introduce the revised Conventions into UK law thereby keeping the operator liability at £140m. Any damage which exceeds this cap or goes beyond personal injury up to 10 years and property damage will rest with the Government to pay; or
 - (ii) Implement the changes to the Conventions and meet our international obligations, but make operators liable only for the types of damage which the market is willing to cover. The non-insurable liabilities will rest with Government.

Neither option is optimal.

With regard to (i), not ratifying and implementing the Convention changes would be disadvantageous for potential victims, the Government and ultimately the tax-payer. Implementing the changes will provide a clear mechanism under the law for victims to claim in respect of an increased range of damage arising from a nuclear incident. In addition, an increased amount of compensation will be available to an increased number of potential victims. So far as the Government and ultimately the tax-payer are concerned, the increase in the financial cap from £140m to €1200m means that, if the changes are implemented in full, the threshold from which Government is required to provide



supplementary funding to meet claims for compensation will be greatly increased. Operators will bear much greater financial responsibility for the consequences of a nuclear incident. In addition, if the changes are implemented in full, there will be a mechanism for public authorities to recover their costs of reinstatement and preventive measures from operators.

So far as outcome (ii) is concerned, victims would receive the benefits of the Convention amendments but Government and the tax payer would have to pay for what should under the Convention fall to the operator to provide. It seems that there may be a strong risk that this would be challenged as a public subsidy to nuclear.

Should Government be required to intervene in the event of market failure to provide security for the Gap, it must charge for any cover at a level which corresponds to the risk Government is taking on, at a price which gives the opportunity to attract commercial insurers into the market, and with a clear and unambiguous date for complete withdrawal from its intervention.

CONCLUSION AND NEXT STEPS

It is anticipated that there will be an anticipated period of about 2-5 years where the industry and the market (defined as NRI, mutuals, commercial insurers and captives) will struggle to provide full risk coverage for the gaps identified in this report. As pointed out above however, most of the risks will be insurable and only the areas around the 10-30 year personal injury time window, and the liabilities arising from authorised discharges may require short to medium term attention from Government.

Some suggested actions would be as follows:

- Continue dialogue with the market encouraging it to find commercial solutions to the gaps.
- Continue dialogue with the larger operators, encouraging them to stimulate market response and seeking input into how they are looking to utilise captive capacity to maximise stable coverage and minimise insurance cost.
- Continue dialogue with smaller operators providing guidance and support in stimulating market competition and minimising cost.
- Engage NRI who have indicated that they feel that Paris and Brussels can be implemented by Government in a way that eliminates the gaps but honours the Government's treaty obligations.
- Structure a temporary (2 Years max) Government financed finite reinsurance product which provides commercially priced reinsurance for the gaps, using market pricing mechanisms.

For and on Behalf of INDECS Consulting Ltd

