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Ms Deborah Tobin  
The Planning Inspectorate  
Temple Quay House  
2 The Square  
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Bristol BS1 6PN

Dear Ms Tobin,

Re: Appeal (APP/P1615/A/06/2029294/NWF) against refusal of planning permission for a Gas Pressure Reduction Station (PRI), Corse, (P0624/06/FUL) by Forest of Dean District Council

Further to National Grid's (hereafter NG) appeal against the refusal of planning permission by the Forest of Dean District Council for its proposed gas Pressure Reduction Installation (PRI) at Corse, Gloucestershire, we write to suggest why the appeal should be dismissed and why the appellant may also be liable for actionable misdemeanours.

Our response to the appellant's claims is, in summary, as follows. The appellant proposes that the building of a high-pressure pipeline, necessitating construction of a PRI at Corse, will serve the national interest in security of energy supply, and so local objections to the site on the ground of risk, environmental harm, loss of amenity value etc. should be disregarded. We propose that, on the contrary, there is no evidence that the conflict occasioning this appeal is between national need and local interests, as the appellant has not demonstrated their proposal is in the national interest. In fact, the construction of the pipeline is demonstrably against the commitment to move towards a low-carbon economy which is at the heart of the Government's 2003 Energy White Paper, and

which represents its attempts to comply with the targets set out in the Kyoto Protocol, which came into force in 2005. We propose instead that the conflict of interest here is between local interests and the private need of a company to secure profits for its shareholders. In the course of its attempts to further its private interests, the appellant has apparently made misleading and at times manifestly false claims about the project's necessity, about its own legal position, its safety record and about the likely risks of employing an untried LNG transportation technology. The real necessity behind the project would appear to be the appellant's need to promptly complete the project and thus comply with the terms of private contracts into which it entered, knowingly assuming thereby business risks which are its own concern and not those of the public.

The detail of our arguments covers five separate considerations:

1. National interest (energy security) argument as grounds for appeal
2. Nature and extent of NG's legal obligations
3. Relevance of national interest argument to pipeline route selection and PRI siting
4. Assessment of harms
5. Assessment of safety risks

## **1 National interest (energy security) argument as grounds for appeal**

NG is a private company under the control of the state with public functions and with powers over and above those assigned to private individuals.<sup>1</sup> As well as the provision of energy infrastructure, among its primary public functions are the provision of data on annual and future energy demands to the Government. OFGEM states that

National Grid (NG) as the system operator is the main party in ensuring supply and demand requirements match. NG liaise with relevant parties to build supply demand data which is modelled to anticipate UK requirements.<sup>2</sup>

NG contributes substantially to the forecasting of demand conducted by the Joint Energy Security of Supply Working Group (JESS), which is chaired by the DTI and OFGEM.<sup>3</sup> It is medium- to long-range forecasts of demand to which NG appeals in arguing that the construction of the pipeline and supporting infrastructure is in the national interest. NG has stressed this point in its representations to the Department of Trade and Industry (under the Public Gas Transporter Pipeline Works (Environmental Impact Assessment) Regulations 1999),<sup>4</sup> to affected local planning authorities and inspectorates,<sup>5</sup> before the court<sup>6</sup> and to the media and to the public. It has maintained that "even if it is concluded by the Secretaries of State that there is a conflict" between its proposal and the regional "development plan" (e.g. in terms of harms, harm-mitigation and safety risks), the appellant believes such conflict would be outweighed by the "wider need and

economic benefits of... facilitat[ing] the supply of gas supplies to the UK.”<sup>7</sup> The crucial feature of the forecasts to which NG is referring is that growth in UK gas demand will result in an increase of imported gas from “less than 30% of annual demand in 2005-6 to around 80% by 2014-15.”<sup>8</sup> Consequently, the national interest case for the pipeline rests on extrapolations of future demand, and *therefore can be no stronger* than the evidence upon which these forecasts are based and the methodology through which they are conducted.

1.1 There are several reasons to question whether the forecast evidence NG calls upon can indeed be relied upon to support its case.

1.1.1 First, in its original application, NG omits to mention that, as OFGEM confirm, these extrapolations are derived from National Grid’s own data.<sup>9</sup> An obvious conflict of interest exists where an advisor to a public authority is asked to advise upon a course of action from which they stand to substantially gain. NG’s forecast of a substantial increase in UK gas demand scenario also represents the most favourable scenario from the point of view of the company’s business interests. That the increase in demand is represented as a necessary development resulting from current trends in consumption overlooks the role that the provision of new infrastructure would have in, as the appellant admits, a demand trend that it is in fact seeking to ‘create’.<sup>10</sup>

1.1.2 This leads us to the second weakness in NG’s arguments concerning energy security, namely their failure to fully take into account the Government’s policy commitment to cut carbon emissions by 60% by 2050 and its obligations under the Kyoto accords, which have been built into the 2003 Energy White Paper cited by NG in support of its proposal.<sup>11</sup> The magnitude of this failure is apparent when we note that the sole scenario considered by NG in making its forecast is one of increased demand. This is against a backdrop of UK and EU commitments to reduce dependence on fossil fuels, including gas, which make such a scenario highly questionable. The subtitle of the Energy White Paper is ‘Creating a Low Carbon Economy’, reflecting the Government’s adoption of targets stipulated by the Kyoto treaty. This position is re-affirmed in the Government’s 2006 Energy Review, which argues that central to this goal is a move away from fossil-energy dependence and to secure energy supplied by “limit[ing] UK dependence on gas” and imported fossil energy.<sup>12</sup> This need to limit UK dependence on gas is reiterated by Secretary of State for Trade and Industry’s subsequent consultation on the Energy Review, *Gas Security of Supply* (October 2006) which clarifies that the Government’s objective is to ‘reduce our economy’s reliance on gas by reducing the demand for gas from... industry and commerce and from the power

generation sector'.<sup>13</sup> On 10 March this year, it was announced that EU countries will be cutting greenhouse gas (GHG) emissions by between 20% and 30% over the next 13 years, and committing themselves to generating 20% of their power from renewable sources.<sup>14</sup> Within the timespan covered by NG's forecast, the stated direction of public policy will be decisively away from dependence on fossil fuels. In such a climate, the idea that dependence on a fuel, LNG, the liquefaction and re-gasification of which could produce up to an additional 25-30% CO<sub>2</sub> emissions compared to North Sea gas,<sup>15</sup> will *necessarily* increase is highly dubious. The appellant's forecasting methods are, by the admission of NG's Demand and Generation Forecasting Manager, Duncan Rimmer, heavily reliant on previous market data and, when faced with the need to incorporate the effects of fresh policy initiatives, such as the EU's latest commitment, can result in "arbitrary" estimates.<sup>16</sup> The only factor NG has so far managed to take into account, according to its published methodology, is the government's Climate Change Levy, which has been operative since 2000. Its forecasts, according to Mr Rimmer, "make allowance" for other policy factors, although how this is done is not specified in the published methodology. However, the crucial problem it faces is a lack of data. NG's current summary of its demand forecasting methodology admits that due to climate change, "at some stage" changes should be made to how demand is forecast, but that currently it has no agreed means of incorporating models of climate change (and of societal, including political, responses to it) into the forecast data.<sup>17</sup> This admission was starkly affirmed as recently as November 2006 by NG's latest Ten Year Statement, where we find the admission that "no results have been forthcoming as yet" from current work by NG on building climate change into demand forecasting.<sup>18</sup> If no data is yet available on the likely impact on gas demand of climate change and measures aimed at mitigating it, then the 'necessity' of the pipeline, in a climate where one of the government's primary energy policy objectives is to *reduce* demand for fossil fuels like gas, is evidently unproven.

1.1.3 In addition to its failure to address the possibility that gas demand may actually *decrease* over the next decade,<sup>19</sup> the appellant does not address the problem of oversupply in the UK gas market and the possible effects this may have on gas demand. Following liberalisation of the UK gas market, the proposed pipeline comprises one of numerous pipelines and liquid natural gas (LNG) projects already in construction or being planned to supply gas to the UK gas market. Whilst domestic gas supply may be decreasing, the government's conjecture in the Energy Review and in its *Gas Security of Supply* regarding possible oversupply aligns with analysts' assessment that capacity provided by the

numerous pipeline and LNG projects in construction and planned over the next ten years is likely '*far too high*' given anticipated demand, and that this will lead to a medium- to long-term oversupply of gas in relation to UK demand.<sup>20</sup>

1.1.4 NG's insistence that its project is *necessary* for securing national energy supplies is therefore unjustified. We might expect that, particularly with respect to climate change, NG's admission that it lacks relevant data would be reflected in an appropriate degree of caution when reporting the outcomes of its forecasting. However, such caution is evidently lacking. In a witness statement to the High Court by National Grid's Senior Project Manager, David Mercer, it is reported that the UK's future reliance on imported gas will increase "as a consequence of depletion of the UK continental gas shelf reserves and *an increase in demand*" (our emphasis).<sup>21</sup> To report this opinion as if it were a demonstrable fact is, as we have shown, to commit a category error. That this is the case is emphasised by the wide variation of estimates in the appellant's own representation. Present in Mercer's witness statement is the claim that growth in UK gas demand will result in an increase of imported gas from "less than 30% of annual demand in 2005-6 to around 80% by 2014-15".<sup>22</sup> This it is at variance with estimates provided by National Grid in its Statement of Case to the Planning Inspectorate and its Environmental Statement to the DTI, which forecasts the proportion to be 75% by 2020.<sup>23</sup> However, we should consider that the appellant's proposal appears not just fundamentally flawed in relation to the available evidence regarding gas demand upon which it rests. It is evident that to implement it would also be *directly against* the UK's national interest. The future of gas demand is subject to significant uncertainties. One certainty, however, is that the direction of energy policy in the UK and across the EU is now being firmly consolidated, with its aim being a reduction in reliance on fossil fuels, including gas. Consequently, the appellant's claim that the pipeline is a matter of national interest *goes directly against* the stated direction of government policy, given that an increase in gas demand, facilitated by increased supply, would serve only to increase in the UK's dependence on gas. As the government has itself declared, this is absolutely not in the national interest.<sup>24</sup>

1.1.5 It is difficult not to draw the conclusion that the appellant's proposal for a pipeline thereby risk deepening the crisis in UK energy policy that gave rise to the 2003 Energy White Paper and the 2006 Energy Review: over-reliance on a single energy source, increasing national vulnerability to price variability and major supply interruption.<sup>25</sup>

## **2 Legal obligations**

- 2.1 The appellant also argues that its license legally impels it to build the pipeline and associated infrastructure, including PRIs. We will now show why it does not, and why the appellant's claim that it does appears bound up with its desire to avoid certain risks which it voluntarily assumed.
- 2.2 The significant weaknesses of the appellant's forecast of future gas consumption is clear if we consider that, under its Gas Transporter Licence, it claims an obligation to respond to changes in actual and projected supply and demand in fulfilling its duties under s.9 Gas Act 1986 (amended) to "develop and maintain a safe, efficient, co-ordinated and economical pipeline system for conveying natural gas".<sup>26</sup>
- 2.3 It is evident that the discretion afforded by the terms "develop and maintain" do not compel the appellant to build *this* pipeline. Its statutory duty therefore provides no obligation to build the pipeline beyond a broad appeal to its licence requirement (to respond to changes in demand and supply), and to its misguided claim that its proposal reflects the priorities of Government policy and is therefore in 'the national interest'.
- 2.4 The appellant argues its licence "compel[s it] to provide new entry requirements when appropriately signalled" by these changes in demand and supply<sup>27</sup> such that not to build the pipeline and associated PRI would render it in breach of its licence.<sup>28</sup> The appeal to licence obligations appears misguided on two counts.
- 2.4.1 First, whilst the licence requires a response of the appellant, it does not follow that it requires it to propose a pipeline of the type and by the route the appellant has chosen. The factors influencing this choice are the appellant's projection of future UK gas demand and supply and its commercial interests (see section 1 above). As the Minister for Energy, Malcolm Wicks, confirmed in October 2005 the choice of pipeline route is a solely commercial decision for NG, and is not itself one tied to any overarching public policy directive or legal statute.<sup>29</sup>
- 2.4.2 Secondly, the requirement to respond is derived from a private contract, along with any deadlines attaching thereto, and thus is owed to its contracting party - whereas the appellant's statutory duty under the Gas Act 1986 (as amended) is owed to the state and hence ultimately the public.
- 2.5 By claiming that it has a legal duty to construct the pipeline and supporting infrastructure along the chosen route, the appellant is arguing that it has a concomitant legal duty to complete the project by the stipulated date. However, this duty is only as set out in the private contract it has signed. The appellant's statement therefore consistently confuses its private and public duties.
- 2.6 The costs of failing to fulfil its private contract are the appellant's concern alone,

especially given that the risk of such failure is arguably built into the appellant's standard business practices. Projects such as the appellant's "tend to commence once the contractual chain is in place, on the assumption that the facilities can be delivered within the required time frame".<sup>30</sup> By stating that the completion of the project is actually in fulfilment of its public duty, the appellant is effectively seeking to transfer the risks it has assumed through its business practices onto the public.

2.7 These risks will be transferred in two forms:

2.7.1 Firstly, there are the environmental and safety risks that this choice of project route will impose without consent on local communities along its length, including those near the site of one of the PRIs. For our criticisms of NG's assessment of these risks in relation to the Corse PRI, see sections 4 and 5 below.

2.7.2 Secondly, there are the direct financial risks of non-completion, relating to a possible injunction preventing NG from constructing an above-ground installation (AGI) at Cilfrew by the contract deadline date of 1 October 2007. The appellant has stated that it intends to transfer the costs of non-completion directly onto the public should it incur them.

2.7.2.1 The appellant has claimed in a witness statement to the High Court that preventing it from fulfilling its contractual obligations would result in the company being liable for compensatory payments for breach of contract.<sup>31</sup> The likely sum involved is unclear. The appellant has admitted that it was "not possible to calculate the exact amount of National Grid's likely liability" for breach of contract "since this depends a series of variable and unpredictable factors such as the extent of the shortfall in capacity, the extent to which the gas which cannot transported via Milford Haven could be sold to other markets or to the UK market through other routes, and the market price for gas during the relevant period".<sup>32</sup> It nonetheless submitted that "given its own" undisclosed "internal scenario modelling... the daily liability... resulting from" breach of contract "could be significant" and "could be anywhere in the region of £400,000, rising to £2.4million per day on a peak winter day".<sup>33</sup>

2.7.2.2 According to the statement, NG believes its liability "could be significant" and "could be anywhere in the region of £400,000". Based on the witness statement, it is difficult to see how this vague estimate can constitute a methodologically sound assessment of risk, particularly when juxtaposed with what presumably represents the upper limit of the possible range of costs (i.e. the £2.4 million figure). To provide an acceptable assessment of financial risks, the important statistical measure in this estimate would be the confidence interval, and the levels of confidence associated with different points within that interval. In order to give an accurate estimate, it is necessary for NG

to state 1) the quantitative range of costs within which they are confident the likely amount of liability will fall, and 2) which figure within that range they have most confidence in, least confidence in, and so on. This would inform one how confident NG are that the most likely cost will, for example, fall between £350,000 and £450,000, or might fall between £10,000 and £200,000. Without such a breakdown of risks in the evidence presented to the court, the figures quoted can only appear tendentious.

2.8 Whatever the final amount of costs that NG claims will be incurred through delay, it states that these losses will necessarily be borne “in the first instance by the general shipping community, and ultimately by consumers in the form of higher gas prices”,<sup>34</sup> a claim echoed by the appellant’s Environmental Statement for the proposed PRI at Corse.<sup>35</sup> It is here that the illegitimate transfer of risk is most clear. Companies have no obligation to externalise (pass on) ‘penalty’ costs onto their customers, but rather choose whether to do so, or whether to internalise them in some way, for instance, by way of a reduction of profits.

2.9 It is thus clear that NG proposes that its decision to bear possibly significant financial risk in signing certain private contracts must necessarily lead to the burden of this risk being borne by the public rather than its shareholders. This is despite the fact that the decision as to where and when infrastructure will be built remains a purely commercial one, that is, one taken solely on the grounds of projected financial returns. In proposing this, NG ignores the obligations it bears to the public over and above those it owes its shareholders. By virtue of being a body under the control of the state with public functions and with powers over and above those assigned to private individuals, it has certain clear and overriding duties to the public under the Human Rights Act 1998. Moreover, by arguing that the attempt to prevent it by injunction from fulfilling its contract “will” be met by an avoidable imposition of burdens onto the British public apparently makes clear the company has no qualms about engaging in extortion.

### **3 Relevance of national interest argument to route selection and PRI siting**

3.1 We will now add some further remarks concerning the connection claimed by the appellant between the particular route and sites chosen for this project with the argument that new LNG infrastructure is necessarily in the national interest, given its forecasts of gas demand.

3.2 According to NG’s Grounds for Appeal and Statement of Case,<sup>36</sup> the conflict over its planning application is one between the national or public interest and local private concerns. As we have shown in section 1 above, the argument that the project is in the national interest is fatally flawed. In addition, it can be easily shown that it is irrelevant to the choice of

route, and that the appellant has consequently misrepresented the nature of the current dispute.

3.3 As noted previously, the Minister for Energy, Malcolm Wicks, has confirmed that National Grid's "preferred" pipeline route<sup>37</sup> and thus its proposed PRI site, has in fact been the subject of a strictly "commercial" decision by the company, subject to the usual planning constraints.<sup>38</sup>

3.4 Regardless whether or not allowing National Grid sole discretion over route selection risks, as some MPs have contended, a governmental dereliction of duty,<sup>39</sup> the Minister's statement confirms that appeal to the national interest with respect to the particulars of pipeline route and sites for supporting infrastructure (meaning all AGIs, including PRIs), is entirely irrelevant. Route selection has been a commercial matter.

3.5 Consequently, it is incorrect to characterise the conflict over its planning application as being one between national interest and local interests. In fact, it clearly lies in the commercial interests of the company against the interests of local communities. The direct conflict between the appellant's private and public duties which we discussed in sections 2.5 – 2.9 is arguably reflected once again in its decision to represent the dispute over the pipeline as one between purely parochial concerns and overriding national ones.

#### **4 Assessment of harms and harm-mitigation**

4.1 In deciding the outcome of a conflict between NG's commercial interests and the interests of local communities, it is necessary to address NG's compliance with planning constraints on the one hand and with health and safety regulations and policy on the other. In this section we argue that the proposal falls short in its assessment of likely harms arising from the project, while in section 5, we argue that its assessment of safety risks appears flawed.

4.2 The appellant claims that compared with the baseline of ordinary, landscape change its proposal would "not result in any unacceptable adverse effects...of the immediate locality or on the surrounding landscape"<sup>40</sup> and that, in any case, "any adverse effects that may arise as a consequence of the development proceeding [are]... outweigh[ed] by benefits associated with the proposed development".<sup>41</sup> We will demonstrate that this assessment is flawed and inaccurate.

4.3 *Planning policy considerations.* The role of planning law and policy in delivering the Government's principle objective of sustainable development is well-established (e.g. Planning Policy Statement 1: delivering sustainable development (PPS1), PPS7: Sustainable development in rural areas). Principles of sustainable development are incorporated in the

Development Plan for the region. The Development Plan for the area comprises the Regional Planning Guidance for the South West (RPG10, 2001), Gloucestershire Structure Plan second review (adopted November 1999) and the Forest of Dean District Local plan Review (adopted November 2005). In accordance with a conventional reading of sustainable development, the overriding principle of the Development Plan is prosperity for community and the regional and national economy in a manner that protects and enhances the environment for current and future generations.<sup>42</sup> Section 38 Planning and Compulsory Purchase Act 2004 requires that planning applications be determined in accordance with the Development plan unless material considerations indicate otherwise. In determining proposals planning authorities should consider whether proposals promote sustainable and inclusive rural development, protect and enhance the natural environment and biodiversity, the quality and characteristics of the countryside and ensure efficient use of resources.<sup>43</sup>

4.3.1 Policy 6 of the Gloucestershire Structure Plan states that that in considering new development proposals, aspects of the environment that should be safeguarded and where possible enhanced include the quality of the landscape, the setting of the settlements and buildings within the landscape.

4.3.2 The Forest of Dean Local Plan requires proposals for development to take account of the principals of sustainability, including making the best use of existing and proposed infrastructure and service and minimising the use of natural resources (Policy (R) F.Strategy 2). Policy (R) FNE.1 seeks to protect the countryside and states that “in order to protect the open countryside developments will be strictly controlled and will only be permitted where the development

- will not result in the unacceptable loss of the best and most versatile agricultural land or woodland;
- will not create amenity problems for adjoining or nearby land users;
- will not result in development of a scale, form, design or appearance that would be visually intrusive or detrimental to the character and appearance of the area;...
- makes provision for a high standard of landscaping and screening to assimilate the development into its surroundings.”

4.3.3 Policy (R) FNE.2 requires development proposals to conserve, and where appropriate enhance, the key characteristics of their surroundings with respect to the landscape, wildlife and natural features. No development is permitted on the best and most versatile agricultural land (grades 1, 2, 3a) unless there is exceptional need (Forest of Dean Local Planning Policy (R) FNE.5). Policy (R) FBE.22 states “proposals for development

will not be permitted where they would give rise to unacceptable loss of amenity by way of pollution likely to cause harm to air, water or land”, and proposals should “minimise the impact of lighting upon the surrounding area” (Policy (R) FBE.1).

4.3.4 At the same time, the Local Plan states that the countryside’s character, appearance and non-renewable and natural resources will be protected from harmful development unless the social and economic needs of the area or wider environmental objectives outweigh such harm (planning policy NHE.1). Similarly, PPG4 (Industrial and Commercial Development and Small Firms) encourages planners not to place unjustifiable obstacles in the way of development which is necessary to provide homes, investment and jobs or to meet wider national or international objectives, whilst nevertheless reconciling necessary development with environmental protection and other development plan policies.<sup>44</sup>

4.3.5 Since there appear no socio-economic needs in the affected area that require the development beyond the appellant’s contractors, the appellant argues that the ‘exceptional circumstances’ that justify the proposal are the national interest of “wider social and economic benefit of facilitate[ing] the supply of gas supplies for the UK”.<sup>45</sup> Since the national interest argument would appear unreliable, the justifiability of the project turns on its remaining claims that the proposal

- “is not contrary to planning policy guidance and legislation;
- the appeal site emerged as the preferred location from a thorough assessment of alternative sites;...
- the proposal will not create an unacceptable risk of security or hazard;
- the proposal will not have an unacceptable impact upon the environment or character of the area; [and],
- the proposal will not have an unacceptable impact upon the amenity or health of existing residential properties.”<sup>46</sup>

4.3.6 The appellant seeks to locate what is in effect a six acre industrial site on current agricultural land close to long-established residential dwellings. Comprising 2 large-scale boiler houses containing 36 industrial gas boilers connected to 12 8.5m high vent stacks, the proposed site will bring light pollution from security flood-lighting columns, noise pollution periodically to 120dBa and thus comparable with a military jet in flight, and an array of noxious and toxic gases (e.g. carbon monoxide and nitrogen oxides) where no such pollutants currently exist. As such the development appears to afford no obvious enhancement to the longstanding rurality of the site, and thus the appellant’s proposal

seems in direct contravention of a principal Government and Development Plan objective of ‘sustainable’ development.

4.3.7 Furthermore, the proposed construction would further impact upon local communities and the character of their area by reducing amenity value in private and community property, likely diminish revenues from tourism, and permanently remove perfectly productive agricultural land from an established agrarian landscape. Accordingly, the appellant apparently proposes to contravene PPS1 (ss.13, 19-20), Policy 6 of the Gloucestershire Structure Plan and Local Plan (R) FBE.1, (R) FBE.22, (R) FNE.1, (R) FNE.2 and (R) FNE.5. In the absence of a ‘national interest’ for the proposal, the Forest of Dean District Council, appears *prima facie* correct to refuse permission on grounds of that these seemingly avoidable and disproportionate harms diverge from planning policy guidance.

4.3.8 In response, the appellant claims that its preferred site is the “best available”, having taken into material factors into consideration and that an assessment of harms, inclusive of harm-mitigation measures to “safeguard” the environment by “minimising” where “feasible” the harm it would create,<sup>47</sup> finds no “unacceptable adverse effects” upon the locality and landscape.<sup>48</sup> Consequently, irrespective of the apparent contravention of planning policy guidance, these measures are regarded to render the proposal compliant.

4.3.9 Since credible environmental impact assessments (EIA) require accurate, comprehensive and unbiased assessment of direct and indirect effects and of alternative options and sites, it is therefore of particular concern that the appellant’s EIA is vulnerable to accusations of inaccuracy and indeed of being appreciably partial and biased. Evidence to warrant such concerns can be observed in the appellant’s route selection (s.4.4), assessment of harms (s.4.5), assessment of harm-mitigation (s.4.6), by harms occasioned by imposition of risks (s.4.7) and use of cost-benefit analysis (s.4.8).

4.4 *An obligation to consider alternative options.* Under Sch. 4 Town and Country Planning (EIA) Regulations 1999 and Art. 3 Council Directive 85/337/EC (as amended), the appellant has a legal obligation to adequately consider alternative options and sites in the pursuit of its end.

4.4.1 These options include the alternative to ‘do nothing’ used to help establish a baseline against which to assess impacts of alternative options and sites.<sup>49</sup> Whilst National Grid admits a duty to respond to signals relevant to the development and maintenance of a pipeline for conveying natural gas, it renders ‘doing nothing’ no alternative.<sup>50</sup> At the same time, it proceeds to register the costs of this option, namely, “restricting gas output from the

new gas terminals”.<sup>51</sup> This is clearly an unbalanced argument since it fails to register any potential benefits likely to arise from the ‘do nothing’ scenario – which in this instance might include avoiding disruption to local communities, their livelihoods, businesses and environments, and the imposition of novel safety risks (see s.5 below).

4.4.2 The appellant also uses the claim that to do nothing would place it in breach of its gas transporter licence<sup>52</sup> to exclude from adequate assessment the ‘do nothing’ scenario. Since its licence is a private contract, and thus obligations thereunder are owed to its contracting party, appeal to its licence with respect assessment of alternatives appears irrelevant: it is not for the public to underwrite a private contractor’s failure to have foreseen the extent to which contractual obligations might render it in breach of law intended to safeguard public safety, property and the environment (see below and s.5).

4.4.3 Clear alternative options that might eliminate any need for the PRI at Corse reportedly include (a) the substitution of the proposed 94 bar pipeline of non-standard bore with a UK standard 75 bar pipeline, (b) increasing the width of the standard pipeline from 48inch to, say, 60inch to secure the same projected supply capacity and (c) the substitution of the ‘preferred’ cross-country route with an offshore route, for example, crossing some part of the Bristol Channel.<sup>53</sup> These options have been dismissed without further assessment by the appellant as being ‘uneconomic’.<sup>54</sup> Since cost is a commercial consideration and thus apparently not a legitimate consideration in planning law, the appellant’s subsequent failure to appraise such alternatives as these solely for reasons of cost renders its assessment of alternative options less than adequate.

4.4.4 National Grid uses a claim that locations other than grade 3 agricultural land at Tirley are “unavailable” for the siting of the proposed PRI as the basis for limiting assessments of alternative locations exclusively to options within the immediate vicinity of the application site.<sup>55</sup> This suggests the appellant has substituted a comprehensive assessment for a partial one, and thereby improperly limited the selection of alternative sites, contrary to Sch.4 Town and Country Planning (EIA) Regulations 1999 and Art.3 Council Directive 85/337/EC as amended.

4.4.5 This suspicion is underscored by confirmation that National Grid’s “preferred” pipeline route<sup>56</sup> has been the subject of a strictly “*commercial*” decision for the company (see discussion in sections 2 and 3 above),<sup>57</sup> (a matter inexplicably omitted from section 4 of the appellant’s Environmental Statement submitted under the Public Gas Transporter Pipe-line Works (Environmental Impact Assessment) Regulations 1999 entitled ‘Route selection, description and justification’). This clearly brings into question any claim that the preferred route is the best route available.

4.4.6 Moreover, whilst private cost factors are not valid material considerations in planning decisions, the Minister's admission suggests that they have been by default permitted to play a lead role in the assessment of alternatives and hence in route selection. Although the appellant may claim the EIA has 'taken all relevant factors into account', that route selection appears in fact to have been a commercial decision suggests that the 'factor' afforded the greatest weight has been the appellant's own profit margins.

4.4.7 Consequently, it is difficult to see how National Grid can claim that the "appeal site emerged as the preferred location from a thorough assessment of alternative sites".<sup>58</sup>

#### 4.5 *Assessment of harms.*

4.5.1 *Audio-visual.* Typical of National Grid's EIA policy is their vetting of individuals likely harmed by the audio-visual impact of the proposed site. The appellant has both falsely claimed that all those within 1000m of the proposed site were interviewed<sup>59</sup> and inexplicably excluded from assessment all those beyond that distance<sup>60</sup> – thereby suggesting a less than credible EIA assumption that all individual's living locally beyond that distance will be insensitive to any day- *or* night-time future disturbance from the site. Both omissions enable the appellant to claim merely that "there will be localised impact".<sup>61</sup>

4.5.1.1 The appellant uses a criticised methodology<sup>62</sup> to account for 'perceptions of value' in its assessment of visual and other impacts.<sup>63</sup> The appellant thereby grants itself the opportunity to fail to make clear whose perception is at play, leave undefined its use of the term 'value' and avoid addressing the epistemological uncertainties of anticipated impacts. This technique enables perceptions of value held by those residents likely to be affected by the proposed permanent change to their local environment to be excluded from consideration, and allows the appellant to presume this value for them through a series of arbitrary categorisations. For example, according to its EIA, those "engaged in work whose primary focus is not necessarily on the surrounding landscape views" should be designated as "least sensitive"<sup>64</sup> to impacts; a presumption which helps support the appellant's somewhat surprising conclusion that the visual impact of the industrial complex will "not [be] out of place"<sup>65</sup> in an agrarian landscape. This view presumes residents to be content to endure a considerable loss of amenity value for some thirty years – by which time the appellant's visual mitigation proposal may become effective<sup>66</sup> (see below) – although given that this comprises predominantly deciduous tree cover, it remains to be seen how effective NG's "robust... planting strategy" will prove during the winter.<sup>67</sup>

4.5.2 *Socio-economic.* The assessment of the appellant's 'socio-economic impacts' on

local populations is, despite subtitle, in fact restricted to the area's "economy, employment structure [and] facilities for recreation",<sup>68</sup> thus excluding from consideration impact on, for example, the tourism sector even though tourism is simultaneously acknowledged in the appellant's Environmental Statement to be a major socio-economic feature of the area<sup>69</sup> (contrary to Sch. 3 Town and Country Planning (EIA) Regulations 1999)).

4.5.2.1 Concerns over detrimental impacts on tourism in this popular rural area are dismissed with an unsubstantiated claim that tourism will "not be significantly affected by the proposed" industrial complex.<sup>70</sup> A similar apparent disregard for accuracy is noted elsewhere in response to concerns that Brecon Beacons National Park numbers will be detrimentally affected by appellant's preferred pipeline route carving its way through part of the National Park: in place of assessment, the appellant asserts undisclosed and unspecified anecdotal 'evidence' that visiting numbers will not be affected.<sup>71</sup>

4.5.2.2 Furthermore, since construction will be outsourced and the site unmanned, the project will fail to provide employment or other benefits to local communities and their environments. National Grid offers no compensation to any, aside the site owner, for these harms and the appreciable de-valuation of properties in affected areas, and regards its proposal to have an overall "neutral" or "slight[ly] beneficial" socio-economic impact<sup>72</sup> in light of the proposed pipeline offering "temporary positive impacts" arising predominantly from labour employed to repair the environmental destruction the appellant seeks to inflict.<sup>73</sup>

4.6 *Assessment of harm-mitigation.* The questionable nature of the appellant's assessment of harms is underscored by the fact that its claim, throughout its Environmental Statement and supporting material, to 'minimise' damage conveniently sidesteps the fact that the parameters by which it appears bound are (commonly) those of a self-determined and voluntary 'code of practice'.<sup>74</sup> Thus, damage-limitation is not objectively addressed. To claim otherwise assumes that the perpetrator of (and in this case, beneficiary from) harms may reasonably decide the level of harm it seeks to inflict. Accordingly, the appellant's claim that these efforts to 'minimise' impact are 'consistent with the principles of sustainable development' planning policies appears somewhat wide of the mark.<sup>75</sup>

4.6.1 Moreover, being a voluntary code of practice without legal basis there is unlikely to be any legal recourse available to the public, or public authorities, should the appellant choose to deviate from this code.

4.6.2 Where the appellant chooses not to mitigate adverse impacts it seeks to impose (e.g. noise and air pollution), appeal is made to planning policy guidance. With regard to the

appellant's refusal to mitigate the proposed introduction of new levels of noise and airborne toxins into the area, it claims that when job creation and construction of essential infrastructure are at stake authorisation may be given to nuisance-creating developments, and that "polluting activities that are necessary for society and the economy" may proceed subject to planning conditions.<sup>76</sup> Since the proposed site is unmanned, contractors outsourced and national 'necessity' not shown, appeal to such planning guidance would seem somewhat misguided.

4.6.3 Under Sch. 4 Town and Country Planning (EIA) Regulations 1999 (and Art.1(5) Directive 85/337EC as amended) the appellant is required to *assess* the direct and indirect short, medium and long-term effects of its proposed activities and operations on climate. In place of assessment, the appellant alludes to local meteorological conditions in its planning application,<sup>77</sup> and claims elsewhere that, in facilitating the increase of UK gas demand, its project will "help the UK meet its commitments to reduce greenhouse gas emissions as part of efforts to minimise climate change".<sup>78</sup> This claim can be placed alongside those we have criticised in sections 1 and 2 above regarding national interest, although in this case it represents a more blatant contradiction in its own terms.

4.6.4 The notion of offsetting greenhouse emissions otherwise emitted by displacing reliance on coal and oil-fired electricity generation is valid if a baseline projection of 'business as usual' is assumed. This assumption is however highly problematic. The assumption of business as usual is incongruent with the government's stated aim of a reduction of the nation's greenhouse gas emissions by 60% of 1990 levels by 2050 - a policy which appears anything but 'business as usual'. Moreover, even if its baseline projection were to comply with government policy, it is likely that any significant 'offset' may be reduced, if not wiped out, by the appellant's proposal to increase greenhouse gas emissions directly by facilitating increased gas consumption and indirectly by fossil fuels consumed in the extraction and transportation of LNG cargo.<sup>79</sup> Accordingly, the proposal seems to contradict planning policy guidance that decisions on planning applications should not favour applications which substantially contribute to increases in fossil energy use and greenhouse gas emissions (PPS1 ss.13 ii and s.20).

4.7 *Harms occasioned by imposition of risks.* The appellant claims that compared with a baseline of ordinary, landscape change its changes to the landscape (inclusive of mitigation) will yield no 'unacceptable adverse effects'. It is apparent that underlying this claim is an assumption that imposed adverse changes are no worse than 'everyday, adverse changes' provided they are of similar magnitude and duration. This value judgement excludes from

assessment the observation that imposed harms are in fact worse precisely because they are imposed.<sup>80</sup> This is because for those subject to imposed change, imposition discounts consent. Accordingly, basic concerns of distributive justice and the criminal law about requiring consent to harms are disregarded at the outset. Moreover, public concerns about the non-consensual imposition of harms are effectively silenced by an assessment that recognises only those impacts directly amenable to quantification (in terms of magnitude and duration of harm).

4.7.1 To thus discount consent to harms seemingly contravenes the principle of natural justice, *audi alteram partem* and the appellant's positive duty not to deny people's right to a fair, impartial hearing (art 6(1) HRA 98; e.g. *Z v UK* (2001) 34 EHRR 97).

4.7.2 Provisions in PPS1 (s.26), the Town and Country Planning (EAI) Regulations 1999 and Council Directive 85/337/EC (as amended) require that information be assessed in an objective and balanced manner free from bias. The claim that there is no adverse effects as compared with existing landscape change relies on discounting local communities' consent to NG's imposition of harms. Moreover, given the findings of the foregoing analysis, it is difficult to see how the appellant can claim that its "proposal will not have an unacceptable impact upon the environment or character of the area" nor "an unacceptable impact upon the amenity or health of existing residential properties".<sup>81</sup>

4.8 *Use of cost-benefit analysis.* This casts doubt on the appellant's "any adverse effects that may arise as a consequence of the development proceeding [are]... outweigh[ed] by benefits associated with the proposed development", for the "adverse effects" and mitigation measures have seemingly been inadequately assessed.

4.8.1 Unfortunately, the appellant provides no figures to justify its conclusion that the 'benefits associated with the proposed developed outweigh any adverse effects that may arise as a consequence of the development proceeding'. The provision of figures would normally require a full-spectrum costing of harms to affected communities and their environment from the PRI construction and operation and quantified benefits from a dismissal of the PRI appeal (e.g. to local health and amenity value), and explanation of assumptions by which the appellant has arrived at these costings (including differences in the costs of not proceeding according to 'business as usual' and to the stated direction of government policy to reduce national reliance on gas). In the absence of these requirements, the appellant's cost-benefit conclusion appears arbitrary.

4.9 *The appellant's exercise of compulsory purchase power.* It is understood that the state and its delegates should only take (rights in) land with lawful authority to meet a justifiable public need (Acquisition of Land Act 1981, s.1), in a manner necessary in a

democratic society and, by denying owners rights in the land, proportionate to that need.<sup>82</sup> The discretion afforded National Grid over choice of pipeline route appears *prima facie* to render questionable whether a contractor ought to be allowed power of compulsory purchase to permanently deprive citizens of their property, as the appellant has sought to do, to ensure a preferred commercial outcome.<sup>83</sup>

## 5 Assessment of safety risks

5.1 In response to public and local planning authority concerns about risks of harms that a project of the proposed magnitude may impose on local communities and their environment, the appellant argues that its safety risk assessments finds that the proposal “create no unacceptable risk of security or hazard”<sup>84</sup> and certainly none greater than those posed by ordinary, everyday risks.<sup>85</sup> Moreover, “any adverse effects that may arise as a consequence of the development proceeding”, are “outweigh[ed by]... benefits associated with the proposed development”.<sup>86</sup>

5.2 The proposed PRI, to be sited near residential dwellings, would receive gas at 94 bar pressure through a pipeline of greater than usual diameter (1220mm). Onshore delivery of gas at this pressure is an unprecedented practice in the UK, US or the EU. To avoid placing such a pipeline near residential dwellings would appear to be good practice as there are well-known dangers associated with siting even ‘normal’ pressure LNG storage and supply facilities near local populations.<sup>87</sup> Explosions may typically occur due to leaks, ruptures, pipe corrosion and third party action. At Carlsbad (New Mexico) in 2000, a 30 inch diameter pipeline ruptured due to internal corrosion, killing 12 people even though they were 1.2 km away. In Ghislenghien, Belgium, 2004, a pipeline operating at 71 bar, subject to third party action, exploded incinerating 24 people and injuring 131 up to 2 km away. In Ufa, Russia, 1989, an undetected leak from an underground pipeline exploded killing 645 people (1989). In Nigeria in 2005, a 28 inch underground pipeline exploded creating a fire that engulfed an estimated 27 sq km.<sup>88</sup> It is thus clear that individuals in proximity to exploding gas pipelines are vulnerable at distances considerably greater than the 1000m National Grid has utilised to determine audio-visual suitability.

5.3 Indeed, despite one of the gravest findings of the report into the Buncefield petroleum explosion having concerned its location near residential areas, the appellant now proposes to site near residential dwellings an untried technology which National Grid and its subcontractors admit statistically insignificant experience of constructing or operating. There is a particular danger present in assessments of risk that apply experience derived from

working with one set of variables to a new set of where many of the parameters of operation have not been established in practice. In essence, to operate complex, untried technologies in such circumstances is to conduct an experiment outside controlled conditions.

5.4 The appellant appears entirely correct to consider its risk assessment of the PRI and associated pipeline to be built to construction codes IG/TD/13 and IG/TD/1 respectively “integral” to its planning application.<sup>89</sup> Somewhat surprising, however, is the conclusion of this assessment that, supported by its claim of an “excellent” and “exemplary” gas transporting safety record, the “risk of accident is no greater than ordinary ‘acceptable’ risks”.<sup>90</sup> Risk assessment commonly involves hazard identification, followed by assessment in terms of hazard-tolerability, hazard-likelihood and hazard-magnitude and there are reasons to regard this conclusion as questionable in relation to both risk identification and to the three types of risk-assessment.

5.4.1 *Hazard-identification.* The appellant initially identifies potential hazards (pipeline rupture) by excluding from assessment precisely those types of hazards with which LNG storage and supply facilities have, since at least the Ufa disaster, been associated.<sup>91</sup> Regard for its relative inexperience with respect the technology in question is similarly excluded, whilst it sees fit to conflate its proposed pipeline with those of smaller dimension with which it has experience.<sup>92</sup> The appellant offers no justification for these omissions and irregularities.

5.4.1.1 Further, the appellant excludes from risk assessment common causes of pipeline failure such as external and internal corrosion, ground movement, pipeline and girth weld defect by appeal to IG/TD/1 and IG/TD/13 design and operation codes for high pressure gas transmission pipelines and installations (p.3 of NTS Safety report). That these codes arguably offer no statistically significant data for onshore 1220mm pipelines operating at 94 bar due to a dearth of operating experience is not accounted for (see below). The appellant offers no justification for omitting from the common risk of third party action<sup>93</sup> the widely-reported and apparently increasing risks of LNG storage and supply facilities as viable targets for sabotage and terrorism,<sup>94</sup> other than to play down sabotage and terrorism concerns by stating that ‘no direct threats have been received relating to installations of this type [sic]’.<sup>95</sup>

5.4.1.2 This conclusion is surprising given intelligence reports of an ‘enduring threat’ of terrorist attack.<sup>96</sup> It is even more surprising given a recent case at the Old Bailey in which seven men were suspected of planning to blow up *inter alia* national high pressure gas pipelines, the appellant willingly testified as to the seriousness of terrorist threats to

its gas transmission and storage facilities, seemingly encouraged by the fact that one suspect was found with bomb making equipment and a CD containing information on National Grid's natural gas transmission network.<sup>97</sup>

5.4.1.3 The result of these inconsistencies is that the appellant fails to offer any probability analysis of risk of large-scale problems associated with major LNG storage and supply facilities, nor any at all at the type of pressure proposed by the appellant – in clear breach of risk assessment protocols and Schedule 3(1) Town and Country Planning (EIA) Regulations 1999.

5.4.1.4 In the absence of justification and argument, it remains unclear why the appellant should select as the sole hazard worthy of assessment, a pipeline puncture from “impact damage or flare impingement” causing small releases of gas and pipeline fire of up to 16m range from a leak.<sup>98</sup> The selection appears arbitrary, but may be possibly related to the fact that this hazard type is one for which the appellant possesses relatively inexpensive precautionary means.<sup>99</sup>

5.4.2 *Hazard-tolerability.* The assessment determines the tolerability of this hazard-type (that is, whether it is one to which the public might tolerably, or better ‘acceptably’, be exposed) by a comparison of the ‘public’s’ subjective evaluation of everyday, ‘insignificant’ risks with an objective evaluation of the hazard type in question.<sup>100</sup> Quite why the appellant should choose to commit the cardinal sin in risk assessment of mixing together two contrasting evaluative perspectives and thereby render determination of tolerability flawed is unclear.<sup>101</sup>

5.4.2.1 The confusion of the voluntary nature of public consent to insignificant risks with the forced nature of the appellant’s selected hazard rests on the assumption that imposed risks are no worse than ‘ordinary, everyday risks’ if they share similar magnitude and likelihood. This value judgement excludes as insignificant the fact that for those subject to imposed risks, such risks are worse precisely because they are imposed. This is because unlike ordinary, everyday risks, imposed risks deny consent. Conflating non-consensual with consensual risks discounts consent and thereby seemingly contravenes the principle of natural justice, *audi alteram partem* and the appellant’s positive duty not to deny people’s right to a fair, impartial hearing (art 6(1) HRA 98; e.g. *Z v UK* (2001) 34 EHRR 97).

5.4.3 *Hazard-likelihood and magnitude.* The assessment of hazard-likelihood (‘frequency failure’) and magnitude (‘failure consequences’) is made by means respectively chosen and designed by the appellant itself.<sup>102</sup> That the potential perpetrator of harms and one who has

a clear pecuniary interest in the assessment outcome should be allowed to direct how the likelihood that it will cause harm and the likely magnitude of this harm will be assessed is clearly detrimental to the objectivity of the assessment. One consequence of this apparent deviation from objectivity is that the assessment of the magnitude of the selected hazard type relies on the likelihood of an unspecified ‘abstract individual’ in the vicinity of such ‘pipeline failure’.<sup>103</sup> This disturbing lack of specificity means that the differences in magnitude of risk to children, older adults and others incapable of ‘moving away from the fire’ at the speed of this abstract adult have not been calculated.<sup>104</sup>

5.4.3.1 The appellant concludes that this risk is ‘tolerable’ by virtue of similar likelihood and magnitude to other everyday risks. The appellant claims that its “nationally recognised... authoritative good practice” standards of design and operation<sup>105</sup> which have “stood the test of time”<sup>106</sup> and its “established” “excellent” and “exemplary” safety gas transporting record<sup>107</sup> will “minimise” the tolerable risk to “reasonably practicable” levels.<sup>108</sup>

5.4.3.2 On closer inspection, the majority of these standards of design and operation turn out to be recommendations of the Institution of Gas Engineers and Managers<sup>109</sup> and the appellant’s contractors’ own “environmental management and construction procedures”,<sup>110</sup> that is, mere voluntary standards. Concerns include (a) conclusions that safety risk derives from extrapolations of construction standards which have yet to be applied in any statistically significant way to onshore pipelines at this pressure, and hence are reached in the absence of relevant experimental or operational data; (b) how the appellant’s ‘commitment’ to ‘strict and thorough programmes of inspection and maintenance’<sup>111</sup> which apparently differ in no substantial way from those observed in, for example, Ghislenghien or Carlsbad, may inspire any sense of confidence in its proposal, and (c) that the appellant’s appeal to voluntary standards may permit it to escape legal sanction for deviation from these standards.

5.4.4 *Safety record.* An additional concern lies in the appellant’s choice to omit from its account of its ‘excellent’ and ‘exemplary’ safety record (as indeed was Belgium’s prior to the Ghislenghien disaster), the following points.

5.4.4.1 The appellant’s main feeder pipeline from Scotland to England experienced at 48 bar a full-line rupture at Palaceknowe, near Moffat, Scotland, in 1993. The accident produced a crater 10m long by 10m wide and 4m deep and released 1,000 tonnes of gas which fortunately did not ignite. HSE and British Gas investigators concluded the failure was due to a design fault.<sup>112</sup> The feeder was designed to run at much higher pressure.

5.4.4.2 National Grid has been careful to limit its safety record to the high pressure National Transmission System and thereby to exclude its safety record on the domestic distribution pipeline network.

5.4.4.3 Salient features of this omitted record include the fact that National Grid (formerly as Transco) was fined by the High Court the record sum of £15million for breach of Health and Safety in 1999 for negligently allowing a leak from a corroding main to explode killing four people in Scotland.<sup>113</sup>

5.4.4.4 National Grid (formerly as Transco) was also fined £1million by the Manchester Crown Court for breach of Health and Safety in 2000, and later ordered to pay costs of £134,000, after pleading guilty to further breaches of Health and Safety legislation which resulted in another fatal gas explosion.

5.4.4.5 In neither of these cases did the appellant express any remorse for the killings.<sup>114</sup>

5.4.4.6 The appellant also stands accused of lying to the public and public authorities about its ‘record on safety improvements’: a report reveals that the company failed to reach Ofgem targets for replacing corroding cast iron pipelines in 2000 whilst claiming to have met them.<sup>115</sup>

5.4.5 *Use of cost-benefit analysis.* In light of its questionable safety risk assessment, the appellant’s conclusion that “any adverse effects that may arise as a consequence of the development proceeding’, are ‘outweigh[ed by]... benefits associated with the proposed development” seemingly requires revision. Unfortunately, the appellant provides no figures to substantiate the claim. To do so would nominally include a full spectrum costing of risks of harms to life, health and property of affected communities, their environment, and assumptions of costings. Crucially, the costs of expected deaths and health risks should have been given to indicate the point beyond which the costs of the project would outweigh the benefits. In the absence of these requirements, the appellant’s cost-benefit analysis appears arbitrary.

5.5 In conclusion we submit that, by (a) omitting from assessment what no rational decision-maker would *prima facie* omit, (b) failing to justify its scientifically questionable hazard-type selection procedure, (c) employing demonstrably flawed methods of assessing hazard tolerability, likelihood and magnitude,<sup>116</sup> whilst (d) apparently feigning a safety record it does not possess, this ‘integral’ part of the planning application may perhaps alone provide adequate grounds with which to dismiss the appeal. Should these points hold, they may even raise questions about the appellant’s fitness to execute its statutory powers to

‘develop and maintain a safe [sic]... gas transmission system’ (s.9 Gas Act 1986 as amended).<sup>117</sup>

## 6 Conclusion and Summary

6.1 Above all, the claim that the pipeline is necessary because of the national interests in maintaining energy security is demonstrably flawed. Not only are the forecasts of gas demand the appellant cites in support of this claim based on highly questionable assumptions and inadequate data, the national interest argument itself is entirely at odds with the stated direction of current UK and EU public energy policy.

6.2 The appellant’s claim of legal obligations misrepresents the legal position: its statutory duty offers no relevant compulsion; its licence does not compel the choice of pipeline type and route that the appellant has made and, being a private contract, appears irrelevant to the appellant’s case. Furthermore, the appellant proposes to transfer the costs it may incur through its own business practices onto the public, again without compulsion to do so.

6.3 Since route selection has been the subject of a private and commercial decision, the national interest argument is irrelevant to the proposed siting of the PRI at Corse. The decision to build the installation here is purely a commercial matter subject to the usual planning constraints rather than something resembling a public policy priority. As such, the conflict over this decision is not one between the national interest and local interests, but between private commercial interest and local interests.

6.4 Accordingly, evaluation of the appellant’s appeal seemingly lies in weighing its interests against those of affected local communities, subject to its compliance with planning and health and safety law and policy.

6.5 The appellant’s proposal, however, fails to comply with planning policy guidance and improperly assesses route selection, harms and harm-mitigation measures, suggesting thereby that the claim of no “unacceptable impact upon the environment or character of the area” and “upon the amenity or health of existing residential properties”<sup>118</sup> cannot be sustained.

6.6 The appellant’s assessment of safety risks is questionable for reasons of irregularities in hazard identification, tolerability, likelihood and magnitude and safety record, suggesting thereby that the claim to create no “unacceptable risk[s] of security or hazard”<sup>119</sup> cannot be sustained.

6.7 Given these numerous serious flaws in the appellant's submission, it is most revealing that it claims opposition to its proposal has offered "no material planning considerations which indicate that planning permission should be refused".<sup>120</sup>

6.8 It is difficult not to draw the conclusion that National Grid's determination to deploy an unproven technology in real-world conditions and impose manifold disproportionate and avoidable harms and risks of harms on local communities (and indeed along the length of the entire pipeline from Felindre to Tirley) implies that it places its duties to observe the public's rights to, for example, peaceful enjoyment of possessions (art. 1 protocol 1 Human Rights Act 1998), to informed consent about risks imposed upon them,<sup>121</sup> and to freedom from harms to health, well-being and other intrusion into private life (art's 2, 8 HRA 1998) some way beneath its duties to its shareholders.

6.9 That energy security can be met in various different ways,<sup>122</sup> and that choice of pipeline route, hence of PRI site, is a commercial matter suggests we must view this dispute as a conflict between local needs and the private need of a company to secure profits for its shareholders. In the course of its attempts to secure such, the appellant has apparently made false claims about the project's necessity, about its own legal position, its safety record and about likely risks – false claims seemingly made for pecuniary reasons for which it by default expects local communities, the environment and businesses to bear the costs. Such grounds may offer sufficient reason to dismiss the appeal, and since these practices bear resemblance to others which are deemed fraudulent in English and Welsh law, may raise further questions.

We please request receipt of the decision of this public inquiry.

Yours sincerely,

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## References

- <sup>1</sup> *Foster v British Gas plc* [1991] 2 AC 306; *Griffen v South West Water Services Ltd* [1995] IRLR 15.
- <sup>2</sup> Email from Mr. Ed Carter, Policy Analyst, OFGEM, 18 December 2006.
- <sup>3</sup> See e.g. Joint Energy Security of Supply Working Group (JESS), Third report (2003).
- <sup>4</sup> National Grid, Felindre to Tirley Pipeline Environmental Statement, 2006.
- <sup>5</sup> National Grid, Environmental Statement (ES) for PRI, Corse, Gloucestershire (**hereafter ‘NG, ES Corse’**) (accompany planning application P0624/06/FUL), April 2006; NG Environmental Statement for PRI, Corse Addendum (**hereafter ‘NG, ES Corse Addendum’**), August 2006; NG, Grounds for Appeal: For the Corse Pressure Reduction Installation (Application ref P0624/06/FUL), November 2006; RPS Planning, Full Planning Application to Install Natural Gas Pressure Reduction Installation at Land Adjacent to Lime Street and Moored Road off B4211, Corse, Gloucestershire: Statement of Case on Behalf of National Grid, January 2007.
- <sup>6</sup> Witness Statement of David Mercer (Senior Project Manager, National Grid) in *R (on application of Linda Ware) v Neath Port Talbot County Borough Council and National Grid* (CO/8159/2006; QB), para. 4
- <sup>7</sup> RPS Planning, *op cit.*, s.5.19.
- <sup>8</sup> Witness Statement, *op cit.*, para.4.
- <sup>9</sup> Email from Mr. Ed Carter, Policy Analyst, OFGEM, 18 December 2006. See also National Grid Transco ‘Gas transportation ten year statement 2005’, s. 3.3.1; National Grid Transco ‘Gas demand forecasting methodology’ Nov. 2004, s. 2.1.
- <sup>10</sup> ‘New pipeline ‘will aid industry’ *BBC News online* 17 July 2006, [http://news.bbc.co.uk/1/hi/wales/south\\_west/5181336.stm](http://news.bbc.co.uk/1/hi/wales/south_west/5181336.stm). The ‘new gas pipeline that will span the breadth of Wales will attract new business and industry, says the National Grid’ [*italics added*]. Equally, increases in demand for natural gas owe much to the direct and indirect replacement by the appellant and others, of coal-fired power stations with gas-fired power stations, thereby suggesting the appellant co-responsible for the creating demand and for the accelerated depletion of the UK’s gas reserves in the first place (see, e.g., House of Lords 2004 ‘Gas: liberalised markets and security of supply’ HL-105, House of Lords EU Select Committee, June 2004, s 24; ‘Turning up the gas’, *The Guardian*, 1 April 2005).
- <sup>11</sup> The Government’s long-standing policy commitments to this reduction find current legislative form in the Climate Change Bill, anticipated to become law by Easter 2008 (<http://environment.guardian.co.uk/climatechange/story/0,,2033311,00.html>). Examples of the appellant’s failure to fully take account of this commitments and the Government’s obligation under the Kyoto Protocol, and hence in the 2003 Energy White Paper, are evident in NG, Grounds, *op cit.*, s. 1; RPS Planning, *op cit.*, s.5.14; NG ES Corse, s.2.2; NG, Felindre to Tirley Natural Gas Pipeline Environmental Statement, August 2006, s.2.2.1.
- <sup>12</sup> DTI, Energy Review, July 2006, p. 12, 20-1
- <sup>13</sup> DTI, Energy Review Consultation, *Gas Security of Supply* (October 2006), pp.24-5.
- <sup>14</sup> “Europe sets benchmark for tackling climate change”, *Guardian*, 10 March 2007. <http://environment.guardian.co.uk/climatechange/story/0,,2030727,00.html>
- <sup>15</sup> Friends of the Earth Cymru, Energy Route Map Consultation Response (November 2005), [http://www.foe.org.uk/resource/consultation\\_responses/energy\\_routemap\\_wales.pdf](http://www.foe.org.uk/resource/consultation_responses/energy_routemap_wales.pdf)
- <sup>16</sup> Confirmed by email dated 3 August 2006 in an FoI request (available on request).
- <sup>17</sup> National Grid, Gas Demand Forecasting Methodology, November 2006, pp.43-4.
- <sup>18</sup> National Grid, Gas Transportation Ten Year Statement 2006, p. 27.
- <sup>19</sup> The failure to account for climate change, which may otherwise include into forecasting a range of scenarios including that of *reduced* future gas consumption, by default promotes climate destabilising fossil fuel-reliant measures with which to seek ‘energy security’ (see, for example, ‘Statement of objection by the Brecon Beacons National Park Authority to the Department of Trade and Industry: National Grid south Wales and the West reinforcement project – natural gas’ 29 November 2005, s.2.6).
- <sup>20</sup> Oxford Institute of Energy Studies, Gas Research Programme, ‘Large scale investments in liberalised gas markets: The case of UK’. (<http://www.oxfordenergy.org/gasprog.shtm>). See also House of Lords 2004 ‘Gas: liberalised markets and security of supply’ HL-105, House of Lords EU Select Committee, June 2004, ss.55-6, 67
- <sup>21</sup> Witness Statement, *op cit.*, para. 4

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- <sup>22</sup> Witness Statement, *op cit.*, para.4.
- <sup>23</sup> RPS Planning, *op cit.*, s.3.34 and National Grid, Felindre to Tirley Natural Gas Pipeline Environmental Statement, August 2006, s.2.2.
- <sup>24</sup> See Energy Review, p.12, 20-1 and the Government's energy policy goal no. 1, expressed in the 2003 Energy White Paper, 'Our energy future – creating a low carbon economy', as putting the UK on a path to cut carbon dioxide (equivalent) emissions by some 60% by 2050.
- <sup>25</sup> Sustainable Development Commission (SDC submission on the DTI Energy Review) *Meeting the challenge: energy policy for the 21<sup>st</sup> century* (April 2006), s. 2.2.2. See also 'Report on the share of renewable energy in the EU and proposals for concrete actions (2004/2153(INI)), Committee on Industry, Research and Energy, European Parliament, July 2005.
- <sup>26</sup> National Grid NG 'Route corridor investigation overview', South Wales and West Reinforcement Project, September 2005, p.2. See also NG ES Corse, s.2.2 and NG response 'b' to C Reynolds' email of 29 June 2006 in NG ES Corse Addendum (p. 1); National Grid, Felindre to Tirley Natural Gas Pipeline Environmental Statement, August 2006, ss. 2.2.1 and 3.2.1
- <sup>27</sup> National Grid, Felindre to Tirley Natural Gas Pipeline Environmental Statement, August 2006, s. 2.2.1 'Need for project'.
- <sup>28</sup> National Grid, Felindre to Tirley Natural Gas Pipeline Environmental Statement, August 2006, s. 2.3.1.
- <sup>29</sup> 'Liquified gas pipeline' in *Hansard* 19 October 2005 Column 1056W
- <sup>30</sup> Email from Professor Jonathan Stern, Director of Gas Research, Oxford Institute for Energy Studies, 6 March 2007.
- <sup>31</sup> Witness Statement, *op cit.*, para. 22-27.
- <sup>32</sup> *Ibid.*, para. 25.
- <sup>33</sup> *Ibid.*, para. 25-6.
- <sup>34</sup> *Ibid.*, para. 28.
- <sup>35</sup> NG ES Corse, s.2.3.
- <sup>36</sup> E.g., NG, Grounds, *op cit.*, ss.1,4 and 6; RPS Planning, *op cit.*, ss.5.4 and 5.19.
- <sup>37</sup> s. 32, National Grid 'Written evidence from National Grid plc' to Select Committee on Welsh affairs, House of Commons, December 2005. See also NG's public representation in 'Route for new gas pipeline confirmed' *Monmouthshire Towncrier* 27 October 2005 and 'Wales plans multi-million pound pipeline' *Alexander's Gas & Oil Connections: News and Trends – Europe* 10(21) 10 November 2005.
- <sup>38</sup> 'Liquified gas pipeline' in *Hansard* 19 October 2005 Column 1056W.
- <sup>39</sup> 'Labour accused of a 'dereliction of duty' as pipeline goes through Tyri' Rhodri Thomas Member of Welsh Assembly Government and Adam Price MP, media release, <http://www.adamprice.org.uk/press/releases/2005-10-27.shtml>, 27 October 2005.
- <sup>40</sup> NG, Grounds *op cit.*, s.2 and RPS Planning, *op cit.*, s.5.11 and 5.18. See also NG ES Corse Appendix 4 'Landscape and Visual' ss.11.1 and 11.4.
- <sup>41</sup> NG, Grounds, *op cit.*, s.4 and RPS Planning, *op cit.*, 5.19.
- <sup>42</sup> RPS Planning, *op cit.*, s.3.3 and 3.15.
- <sup>43</sup> PPS1, ss.5 and 13.
- <sup>44</sup> PPG4, s. 13
- <sup>45</sup> RPS Planning, *op cit.*, s.5.19.
- <sup>46</sup> RPS Planning, *op cit.*, s.5.18.
- <sup>47</sup> National Grid 'Felindre to Tirley: Natural gas pipeline environmental statement' non-technical summary, August 2006, pp.9-10.
- <sup>48</sup> NG, Grounds, *op cit.*, s.2.
- <sup>49</sup> National Grid, Felindre to Tirley Natural Gas Pipeline Environmental Statement, August 2006, s. 2.3.1; National Grid 'Felindre to Tirley: Natural gas pipeline environmental statement' non-technical summary, August 2006, p. 2.

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- <sup>50</sup> National Grid, Felindre to Tirley Natural Gas Pipeline Environmental Statement, August 2006, s.2.3.1 ES; National Grid ‘Felindre to Tirley: Natural gas pipeline environmental statement’ non-technical summary, August 2006, p.2-3.
- <sup>51</sup> Ibid.
- <sup>52</sup> RPS Planning, *op cit.*, s.2.6 and National Grid, Felindre to Tirley Natural Gas Pipeline Environmental Statement, August 2006, s.2.3.1.
- <sup>53</sup> See, for example, Brecon Beacons National Park Authority, Felindre to Tirley Natural Gas Pipeline: Response to Environmental Statement, 2006, s.2.3.4 ‘Sub-sea pipeline, buried cross country pipeline’.
- <sup>54</sup> National Grid (NG) ‘Route corridor investigation overview’, South Wales and West Reinforcement Project, September 2005, p.9; NG response ‘c’ to C Reynolds’ email of 29 June 2006 in NG ES Corse Addendum (p. 2-3).
- <sup>55</sup> NG ES Corse, s.5.3 ES (p.31). See also NG response to ‘Additional points raised by the community’ in C Reynolds email of 29 June 2006 (under PPS7: Sustainable development in rural areas, p.11) in NG ES Corse Addendum; see also the appellant’s claims in ‘Beauty spot pipeline ‘will be terror target’’ IC Birmginham.co.uk 13 June 2006.
- <sup>56</sup> National Grid ‘Written evidence from National Grid plc’ to Select Committee on Welsh affairs, House of Commons, December 2005, s. 32. See also NG’s public representation in ‘Route for new gas pipeline confirmed’ *Monmouthshire Towncrier* 27 October 2005 and ‘Wales plans multi-million pound pipeline’ *Alexander’s Gas & Oil Connections: News and Trends – Europe* 10(21) 10 November 2005.
- <sup>57</sup> ‘Liquified gas pipeline’ in *Hansard* 19 October 2005 Column 1056W.
- <sup>58</sup> RPS Planning, *op cit.*, s.5.18.
- <sup>59</sup> The appellant claims to have interviewed all ‘receptors’, or (unspecified) ‘receptor groupings’ within 1000m of the proposed site on Thursday, 9<sup>th</sup> February 2006 (see NG ES Corse, s.11.2.4). With residences within this radius and of such location and orientation as to render impossible any credible presumption of ‘receptor grouping’, Mrs T. Caldbeck of Corse Hill Farm and Mr P McMurtrie of Walk Farm were not contacted as the appellant claims. In fact, the residents had to contact the appellant themselves and insist that it visit them, which representatives eventually did some two months later, on 4 April 2006.
- <sup>60</sup> See ‘Residential properties’ in visual impact assessment, NG ES Corse, Appendix 4A, s.11.3.4. Quite why only *daylight* concerns were considered when the appellant seeks also to disrupt a night-time landscape relatively unadulterated by light pollution, and thereby to make it visible at least as far away, for example, as the Malvern Hills, is left entirely unexplained (see, for example, ss.11.3.2.3-11.3.2.5, 11.3.4, 11.4.3.1 NG ES Corse).
- <sup>61</sup> RPS Planning, *op cit.*, s.2.20.
- <sup>62</sup> Positivist and instrumentalist assumptions of the kind the appellant’s environmental impact assessment makes have long been the target of sustained critique (see assumptions in NG ES Corse, s.11.3, e.g., *Guidelines for environmental impact assessment* IEMA 2004 and in NG ES Corse, Appendix 4A, s.11.3.3). For criticisms, see, for example, Shrader-Frechette, K. 1985 *Risk analysis and scientific method: Methodological and ethical problems evaluating societal hazards*, Kluwer, ch’s 1, 2,6; Shrader-Frechette, K. 1985 *Science policy, ethics and economic methodology of social science: Some problems with technology assessment and environmental impact assessment*, Springer, ch’s 3-4; Fischhoff, Slovic and Lichtenstein ‘Facts and fears’ in Schwing, R. and W. Albers eds. 1970 *Societal risk assessment: How safe is safe enough?*, New York: Plenum Press; and Scriven 1998 ‘The exact role of value judgements in science’ in Klemke, E, R. Hollinger and A. Kline eds. *Introductory readings in the philosophy of science*, Prometheus.
- <sup>63</sup> National Grid, Felindre to Tirley Natural Gas Pipeline Environmental Statement, August 2006, ss.4.4, 7.3.3, 11.1 and National Grid ‘Felindre to Tirley: Natural gas pipeline environmental statement’ non-technical summary, August 2006, p.11.
- <sup>64</sup> NG ES Corse, Appendix 4A, s.11.3.4 ‘Sensitivity to change’.
- <sup>65</sup> NG ES Corse Addendum, s. 11.5.2, paragraph 2 (p.13)
- <sup>66</sup> NG ES Corse, ss.11.6.1 and 11.7.2.
- <sup>67</sup> NG ES Corse, Appendix 3B and ss.11.5.1 and 11.5.2 Appendix 4A.
- <sup>68</sup> NG ES Corse, ss.14.1 and 14.2.
- <sup>69</sup> NG ES Corse, s.14.4.2.
- <sup>70</sup> RPS Planning, *op cit.*, s.2.26; Murphy Pipelines, ‘Socio-economic’ in *Brecon to Tirley 1200mm Pipeline: Corse PRI*, non-technical summary, April 2006.
- <sup>71</sup> National Grid, Felindre to Tirley Natural Gas Pipeline Environmental Statement, August 2006, s.15.7.3.6.

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- <sup>72</sup> NG ES Corse, s.14.7.
- <sup>73</sup> National Grid, Felindre to Tirley Natural Gas Pipeline Environmental Statement, August 2006, s.15.7.1.
- <sup>74</sup> See, e.g., National Grid, Felindre to Tirley Natural Gas Pipeline Environmental Statement, August 2006, ss.7.6, 8.6, 10.6, 11.6, 12.6, 15.6, 17.2 and National Grid ‘Felindre to Tirley: Natural gas pipeline environmental statement’ non-technical summary, August 2006, pp. 9, 18.
- <sup>75</sup> NG response ‘b’ to C Reynolds’ email of 29 June 2006 in NG ES Corse Addendum (p. 2). Similar misuse of the term is evident in the appellant’s claims of compliance with Natural Environment and Rural communities Act 2006 and Local Planning Policy (R)NE.7 (NG response ‘a’ to C Reynolds’ email of 29 June 2006 in NG ES Corse Addendum, p. 1) by confusing its obligations to protect biodiversity with the protecting only those items of biodiverse ‘value’.
- <sup>76</sup> NG response to ‘Additional points raised by the community’ in C Reynolds’ email of 29 June 2006 (re: PPS 24: Planning and noise and PPS23: Planning and pollution control, pp.12-3) in NG ES Corse Addendum. See also National Grid, Felindre to Tirley Natural Gas Pipeline Environmental Statement, August 2006, s.5.3 (p.32).
- <sup>77</sup> NG ES Corse, s.6.2.
- <sup>78</sup> NG, ‘Felindre to Tirley: Natural gas pipeline environmental statement’ non-technical summary, August 2006, p.17.
- <sup>79</sup> Friends of the Earth Cymru, Energy Route Map Consultation Response (November 2005), [http://www.foe.org.uk/resource/consultation\\_responses/energy\\_routemap\\_wales.pdf](http://www.foe.org.uk/resource/consultation_responses/energy_routemap_wales.pdf)
- <sup>80</sup> Shrader-Frechette, K. 1993. *Burying Uncertainty*, University of California Press., p. 129; Shrader-Frechette, K. 1985 *Science policy, ethics and economic methodology of social science*, pp. 67ff., 121ff., 210ff., 286ff.; Cox, L. and Ricci, P. ‘Legal and Philosophical Aspects of Risk Analysis’, in *The Risk Assessment of Environmental and Human Health Hazards*, ed. D Paustenbach, pp. 1017-1046.
- <sup>81</sup> RPS Planning, *op cit.*, s.5.18.
- <sup>82</sup> E.g. *Mellacher v Austria* 10522/83 (1990) 12 EHRR 391
- <sup>83</sup> ‘Protest against LNG land purchase’ *BBC News online* 11 June 2006; ‘National grid threatens compulsory purchase in the Golden Valley’ and ‘Bulldozers and lawyers threaten CRT’s Turnstone Court Farm’ The Countryside Restoration Trust media releases respectively of 27 April 2006 and 5 July 2006.
- <sup>84</sup> RPS Planning, *op cit.*, s.5.18.
- <sup>85</sup> NG, ‘AGI Risk Assessment – Corse PRI’ NTS Safety and Reliability Report, April 2006, pp.1, 2, 4, 8, 9.
- <sup>86</sup> NG, Grounds, *op cit.*, s.4.
- <sup>87</sup> See, for example, ‘Liquified natural gas safety’, California Energy Commission ([www.energy.ca.gov/lng.safety.html](http://www.energy.ca.gov/lng.safety.html)); ‘Review of the independent risk assessment of the proposed Cabrillo LNG deepwater project’, Sandia National Laboratories January 2006 (which indicates flammable LNG vapour clouds could extend some 6-7 miles); ‘International and national efforts to address the safety and security risks of importing liquefied natural gas: A compendium, prepared for the California Energy Commission by Aspen Environmental Group’ January 2005 (available on [www.energy.ca.gov](http://www.energy.ca.gov)); ‘Consequence assessment methods for incidents involving releases from LNG carriers’ prepared by ABSG for the US Federal Energy Regulatory Commission under contract no. FERC04C40196, May 2004; ‘LNG safety and security’, Centre for Energy Economics at the Bureau of Economic Geology, University of Texas at Austin, October 2003 (available at [www.beg.utexas.edu/energyecon/lng/documents/CEE\\_LNG\\_Safety\\_and\\_Security.pdf](http://www.beg.utexas.edu/energyecon/lng/documents/CEE_LNG_Safety_and_Security.pdf)); ‘Liquified natural gas (LNG) infrastructure security: Background and issues for Congress’, Congressional Research Service – Library of Congress, 9 September 2003; ‘Experts raise safety fears over new generation of liquid gas terminals’ *The Guardian* 31 January 2006.
- <sup>88</sup> See, for example, See, for example, ‘Liquified natural gas safety’, California Energy Commission ([www.energy.ca.gov/lng.safety.html](http://www.energy.ca.gov/lng.safety.html))
- <sup>89</sup> NG response ‘j’ to C Reynolds’ email of 29 June 2006 in NG ES Corse Addendum (p. 5).
- <sup>90</sup> National Grid, ‘AGI Risk Assessment – Corse PRI’ NTS Safety and Reliability Report, April 2006, p. 1, 9; NG response ‘j’ to C Reynolds’ email of 29 June 2006 in NG ES Corse Addendum (p. 5); National Grid ‘Felindre to Tirley: Natural gas pipeline environmental statement’ non-technical summary, August 2006, p.9.
- <sup>91</sup> National Grid, ‘AGI Risk Assessment – Corse PRI’ NTS Safety and Reliability Report, April 2006, p. 3.
- <sup>92</sup> That ‘hazard ranges’ may in fact ‘vary with pipeline diameter’ appears a contention ignored by the appellant (see ‘Individual Risk Assessment’, West Mercia Local Resilience Forum Risk reference no. H7, s.1,

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www.westmercia.police.uk/publications/ccapdf/risk%20Assessment%20-%20H7.pdf).

- <sup>93</sup> UKOPA, UKOPA Pipeline Fault Database: Pipeline Product Loss Incidents (1962-2004), April 2005, p.8.
- <sup>94</sup> E.g., House of Lords 2004 'Gas: liberalised markets and security of supply' HL-105, House of Lords EU Select Committee, June 2004, s. 18, ch. 4; 'Liquified natural gas safety', California Energy Commission ([www.energy.ca.gov/lng.safety.html](http://www.energy.ca.gov/lng.safety.html)); 'International and national efforts to address the safety and security risks of importing liquefied natural gas: A compendium, prepared for the California Energy Commission by Aspen Environmental Group' January 2005 (available on [www.energy.ca.gov](http://www.energy.ca.gov)); Havens, J. 'Terrorism: ready to blow' *Bulletin of the Atomic Scientists* 59(4) July/August 2003, pp.16-8; 'Liquified natural gas (LNG) infrastructure security: Background and issues for Congress', Congressional Research Service – Library of Congress, 9 September 2003; Easthauer, K. 'Destination Humboldt Bay: The liquefied natural gas debate heats up' *North Coast Journal*, 6 November 2003; 'Liquified natural gas: a potential terrorist target' *New York Times* 11 February 2006; Text from US Congressional Record House Floor Arguments over Energy Bill HR6 Energy Policy Act of 2005 sec 320, 'liquefaction or gasification natural gas terminals' at page H2344 (21 April 2005).
- <sup>95</sup> NG response 'j' to C Reynold's email of 29 June 2006 in NG ES Corse Addendum (p.6)
- <sup>96</sup> BBC News online 'MoD officers 'guard gas terminals'', 16 January 2007.
- <sup>97</sup> 'Jury shown gas explosion mock up' BBC News online 29 August 2006
- <sup>98</sup> National Grid, 'AGI Risk Assessment – Corse PRI' NTS Safety and Reliability Report, April 2006, p. 3.
- <sup>99</sup> National Grid, 'AGI Risk Assessment – Corse PRI' NTS Safety and Reliability Report, April 2006, e.g., p. 6.
- <sup>100</sup> National Grid, 'AGI Risk Assessment – Corse PRI' NTS Safety and Reliability Report, April 2006, p.4.
- <sup>101</sup> See, for example, Breyer, S. 1997 'Breaking the vicious circle: Toward effective risk regulation' in Revesz, R. ed. *Foundations of environmental law and policy*, Oxford: OUP; Cooke, R. 1991 *Experts in uncertainty: Opinion and subjective probability in science*, Oxford: OUP, ch. 9.
- <sup>102</sup> National Grid, 'AGI Risk Assessment – Corse PRI' NTS Safety and Reliability Report, April 2006, p.6.
- <sup>103</sup> National Grid, 'AGI Risk Assessment – Corse PRI' NTS Safety and Reliability Report, April 2006, p.7.
- <sup>104</sup> National Grid, 'AGI Risk Assessment – Corse PRI' NTS Safety and Reliability Report, April 2006, p. 7.
- <sup>105</sup> National Grid, 'AGI Risk Assessment – Corse PRI' NTS Safety and Reliability Report, April 2006, p. 4, 8; see also NG response 'j' to C Reynolds' email of 29 June 2006 in NG ES Corse Addendum (p. 5).
- <sup>106</sup> National Grid, 'AGI Risk Assessment – Corse PRI' NTS Safety and Reliability Report, April 2006, p. 4.
- <sup>107</sup> National Grid, 'AGI Risk Assessment – Corse PRI' NTS Safety and Reliability Report, April 2006, p. 4, 9; see also NG response 'j' to C Reynolds' email of 29 June 2006, in NG ES Corse Addendum (p. 5)
- <sup>108</sup> National Grid, 'AGI Risk Assessment – Corse PRI' NTS Safety and Reliability Report, April 2006, p. 4.
- <sup>109</sup> National Grid, 'AGI Risk Assessment – Corse PRI' NTS Safety and Reliability Report, April 2006, p. 3; see also NG response 'j' to C Reynolds' email of 29 June 2006, in NG ES Corse Addendum (p. 5) and National Grid 'Felindre to Tirley: Natural gas pipeline environmental statement' non-technical summary, August 2006, p. 9.
- <sup>110</sup> NG ES Corse, s.3.3.10.
- <sup>111</sup> National Grid 'Felindre to Tirley: Natural gas pipeline environmental statement' non-technical summary, August 2006, p. 9.
- <sup>112</sup> Report on a study of international pipeline accidents: Contracts research report 294/2000 prepared for the HSE by Mechphysic Scientific Consultants: 2000.
- <sup>113</sup> To put this into some perspective, Balfour Beatty were fined £7.5million for criminal safety offences related to multiple fatalities in the Hatfield crash (*Risks Newsletter*, TUC, no 264, 8 July 2006)
- <sup>114</sup> See, for example, presiding judge Lord Carlway in 'Gas blast family seeks law change', BBC News online 12 October 2005 (<http://news.bbc.co.uk/1/hi/scotland/4332802.stm>).
- <sup>115</sup> See account of the report of the appellant's auditors, Mazars Neville Russell, in Hodge, N. 'Scotland: Gas monopoly faces killing charge over death of family' 15 March 2002 (<http://www.wsws.org.articles/2002/mar2002/tran-m15.shtml>); see also 'Dozy Parker' *Private Eye* no. 1071, 10 October 2003, p26.
- <sup>116</sup> For a good overview of the questionable types of assumptions the appellant makes, see, for example, Kahneman, D. and A. Tversky 1981 'Subjective probability' in Kahneman, D., A. Tversky and P. Slovic eds. *Judgment under*

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*uncertainty: heuristics and biases*, Cambridge: CUP; the seminal Kahneman, D. and A. Tversky 1973 'On the psychology of prediction' *Psychological Review* 80, pp. 237-51; Fischhoff, Slovic and Lichtenstein 'Facts and fears' in Schwing, R. and W. Albers eds. 1970 *Societal risk assessment: How safe is safe enough?*, New York: Plenum Press; pp. 475-8.

<sup>117</sup> Note should perhaps also be made of the contention that an adequate risk assessment has yet to be conducted for the two LNG terminals at Milford Haven ('LNG court challenge rejected' *Milford and West Wales Mercury*, 20 July 2006; 'Experts raise safety fears over new generation of liquid gas terminals' *The Guardian* 31 January 2006) and of the appellant's partners' decision not to refute accusations that they misled local communities over the adequacy of the Milford Haven terminals' Environment Statement ('Park expected to approve South Hook changes' *Pembrokeshiretv.com*, 21 February 2006).

<sup>118</sup> RPS Planning, *op cit.*, s.5.18.

<sup>119</sup> *Ibid.*

<sup>120</sup> NG, Grounds, *op cit.*, s.5.

<sup>121</sup> See, for example, Shrader-Frechette, K. 1985 *Risk analysis and scientific method: Methodological and ethical problems evaluating societal hazards*, Kluwer, ch. 4.

<sup>122</sup> E.g., 'Report on the share of renewable energy in the EU and proposals for concrete actions (2004/2153(INI)), Committee on Industry, research and Energy, European Parliament, July 2005