

BRITISH ELECTRICITY TRADING AND TRANSMISSION ARRANGEMENTS

REGULATORY IMPACT ASSESSMENT

1. Introduction:

1.1 This is the Regulatory Impact Assessment (RIA) for the primary legislation that will facilitate the introduction of British Electricity Trading and Transmission Arrangements (BETTA).

1.2 A draft RIA was published by DTI/Ofgem as an Annex to the May 2002 DTI/Ofgem Consultation Document on BETTA (www.ofgem.gov.uk/docs2002/38betta_report_apps.pdf). This RIA takes into account responses to that draft.

1.3 The draft RIA concluded that BETTA could deliver annual economic benefits of £35 million with a present value, discounted at 6% per annum in real terms, of £570 million. In due course, competition in electricity generation and supply, and effective regulation of monopoly activities of transmission and system operation, would ensure that these benefits would accrue to electricity consumers in the form of lower prices. The draft RIA did not include an overall estimate of the costs of implementing BETTA.

1.4 The draft RIA also came to the preliminary view that on balance BETTA would have a small positive impact on renewable and CHP generation in Scotland although it was recognised there were uncertainties in this area.

1.5 About 30 responses were received on the overall consultation document published in May 2002. Of these, 7 made specific reference to the draft RIA. The respondents that commented on the RIA are listed in Annex A. They include the two major electricity companies in Scotland, three electricity companies operating mainly in England and Wales, Energywatch and a response from the coal industry.

2. Purpose and Intended Effect of the Measure:

2.1 The purpose of BETTA is to facilitate the creation of a single, integrated and competitive wholesale electricity market covering the whole of Great Britain (GB). This will involve:

- A single GB system operator
- common rules and charging arrangements for connecting to and using the transmission system;
- a common set of balancing and settlement arrangements.

2.2 At present, differences in the rules and charging arrangements between Scotland and England and Wales limit competition between them and the absence of

market based arrangements in Scotland inhibits effective competition within that region.

2.3 Almost all the generating capacity in Scotland is currently allocated to the two major electricity companies operating in Scotland, Scottish Power and Scottish and Southern Energy¹, whereas generation ownership in England & Wales is much more widely distributed with no single company owning more than 20% of capacity². There has been significant new entry and exit by generators in England & Wales, in contrast to Scotland where entry and exit has been negligible since privatisation. In the electricity supply market for domestic consumers, some 69% of Scottish customers remain with their home supplier compared to 66% for GB as a whole³. Domestic electricity prices in Scotland are some 10% higher on average than in England & Wales⁴, although an important reason for this is higher distribution system charges in Scotland which will not be affected by BETTA. And in Scotland, the transmission networks are owned and operated by Scottish Power and Scottish and Southern Energy, companies with substantial generation and supply interests, whereas in England & Wales, the transmission system is owned and operated by National Grid Company (NGC) which does not have generation or supply interests.

2.4 As well as improving competition, BETTA will facilitate the exploitation of economies of scale in the natural monopoly activities of transmission system operation and imbalance measurement and settlement, with one operator replacing the current three operators.

2.5 The purpose of this RIA is to assess the impact of BETTA. The impact of BETTA has been appraised for its potential impact on competition in wholesale electricity and related markets, its impact on regulated elements of the electricity sector and its impact in other areas such as the environment. The purpose of the legislation is to enable reform rather than to specify the details of BETTA. The details of BETTA will be manifested by and embodied within licences and other core industry documents. The process of consultation to design and develop licences and core documents to deliver BETTA is being progressed jointly by Ofgem and DTI. Details are not therefore finalised and may not be finalised at the time of legislation. Consequently, estimates of costs and benefits set out here are generic in form and designed to be robust to a wide range of possible implementation details.

2.6 This assessment does not take into account potential fundamental reforms to transmission access and charging arrangements, as consulted on by Ofgem in February 2002 in respect of England & Wales and in December 2002 in respect of proposals for NGC's system operator incentives to apply from April 2003. Possible modifications to England & Wales arrangements are presently being taken forward by the industry. The application of any such reforms on a GB basis under the umbrella of BETTA will be subject to further detailed consultation.

¹ About 26% of generating capacity in Scotland is owned by British Energy but is currently contracted to Scottish Power and Scottish and Southern Energy under the Nuclear Energy Agreement.

² Source: Table 5.10 of the DTI Digest of UK Energy Statistics 2002. The recent purchase of TXU plant by PowerGen has been taken into account.

³ Data for Q2 2002. Source: DTI.

⁴ Source: Table 2.1 of "Electricity Supply Competition: an Ofgem Occasional Paper". 16th December 2002.

2.7 Competition is a key element of the Government's energy policy. The principal objective of the regulator for gas and electricity markets, Ofgem, is to protect the interests of consumers, wherever appropriate by promoting effective competition. Competition promotes efficiency and creates choice and value for customers. It ensures that existing resources are used efficiently, and that decisions on new investment are based on appropriate economic signals. It is anticipated that more competitive wholesale electricity markets will increase competition in electricity retail markets, and in other related markets such as gas supply.

2.8 The proposed legislation will enable the introduction of GB-wide arrangements for the trading and transmission of electricity by providing for:

- a licensed GB system operator, who is independent of electricity generation and supply interests;
- a GB Balancing and Settlement Code (GB-BSC) and Balancing Mechanism; and
- a GB Connection and Use of System Code (GB-CUSC) and associated charging methodologies and statements.

2.9 The revised licensing framework and associated documents will be enduring arrangements. As such they will affect the development of competition in both the short term and the longer term.

3. Risk Assessment:

3.1 This regulatory measure is not designed to address directly risks to consumer or worker safety or health, or to the environment, as is the case with a great many Government regulations.

3.2 The key risk addressed by BETTA is the risk to consumers of higher prices and lower standards of services associated with a lack of effective competition. This risk is discussed in the main assessment of benefits that follows.

4. Options:

4.1 The promotion of effective competition is one of the key ways in which Ofgem can pursue its statutory duty to protect consumers. For a wide range of reasons, including asymmetric information between regulators and those regulated, the sharper incentives that competition places on economic actors, and the need for successful firms in competitive markets to understand the needs and wishes of their customers and, where possible, innovate to meet those needs, effective competition is more likely to protect consumers' interests than regulation.

4.2 Ofgem has consulted widely on the effectiveness of competition on a GB basis, in the context of potential barriers to such competition for parties located or wishing to trade electricity in Scotland. A number of options have been considered through this process, including independent reform of Scottish arrangements allied

with reform of the interconnector between the England & Wales and Scotland transmission systems.

4.3 Ofgem and DTI have concluded through this consultation process that common GB arrangements underpinned by a single GB system operator independent from generation and supply interests is most consistent with an effective competitive market. A GB system operator independent of generation and supply interests operating within a transparent and robust regulatory regime of the kind envisaged by the BETTA proposals cannot be introduced without primary legislation.

4.4 There are many possible models for an integrated GB wholesale electricity market. However, the New Electricity Trading Arrangement (NETA) framework in operation in England & Wales since March 2001 provides a sensible starting point. NETA was implemented following extensive consultation, and shares common underlying objectives with BETTA. A GB system based on NETA principles will minimise disruption to market participants in England & Wales, and will very significantly reduce development and implementation costs.

4.5 A design of BETTA based around a GB system operator independent from generation and supply, and NETA-based market mechanisms and core documents is therefore the only option under consideration and so long as the benefits of this option exceed its costs, it will be preferable to doing nothing.

5. Identifying the Benefits:

5.1 The benefits of BETTA can be expected to come in the following main areas:

- greater competition in the generation and supply of electricity;
- greater competition in the provision of balancing services for the system operator;
- improved locational signals for generating plant, location-flexible demands, and transmission capacity;
- economies of scale in transmission system operation; and
- avoidance of separate arrangements for interconnection between England & Wales and Scotland.

5.2 These benefits are expected to be felt primarily in Scotland, where the degree of change to existing arrangements will be more dramatic. The benefits for consumers in England & Wales are likely to be small in view of the fact that the trading arrangements will not change substantially, the market in that region is already more competitive and that it is a far larger market than that in Scotland. For these reasons, no attempt is generally made in what follows to identify any short term benefits to customers in England & Wales.

5.3 However, the creation of a single GB market will support more efficient signals for the longer term development of the electricity transmission systems and the associated patterns of generation and demand. These improved economic signals in the context of an effective competitive market will deliver benefits to consumers across GB.

5.4 BETTA might also be expected to impact on how the costs of the transmission system across GB are recovered, by moving from separate cost recovery in the three current transmission areas to cost recovery on a GB basis. The replacement of four sets of transmission charges (the three transmission areas plus charges for use of the Scotland-England interconnector) with a GB charging regime could be expected to result in more cost-reflective charges – thereby unwinding inherent cross-subsidies which exist under the present regime. The effect on customers and generators will depend on the detail of the GB charging methodology, which will be subject to consultation. It should be stressed that this would be a redistributive effect as opposed to a net benefit. It would, however, have a direct impact on customers in different regions of GB. To illustrate the nature of the change, a more cost reflective regime for GB could potentially reduce the contribution made by consumers in Scotland towards GB transmission costs by around £95m a year.

6. Points Raised in response to the draft RIA estimates of benefits:

6.1 The draft RIA concluded that BETTA could deliver annual economic benefits of £35 million with a present value, discounted at 6% per annum in real terms, of £570 million. The main points raised in relation to the estimate of economic benefits in the draft RIA were the following:

- Benefits were assessed over too long a period;
- BETTA would have little if any impact on Scottish wholesale electricity prices since these were already regulated by reference to NETA prices in England & Wales;
- The benefits of increased competition between England & Wales on the one hand, and Scotland on the other, could not come about so long as the lack of interconnection capacity between the two regions acted as a serious constraint;
- The draft RIA had overstated current levels of balancing costs in Scotland and hence overstated the potential benefits from reducing them;
- The draft RIA had overstated current levels of Scottish system operation costs and interconnector administration costs and hence overstated the potential benefits from reducing them.

6.2 Overall, 5 of the 7 responses felt the draft RIA had overstated the likely benefits of BETTA, whilst the other 2 responses did not express a view about the scale of these benefits one way or the other.

6.3 Benefits assessed over too long a period:

6.3.1 In the draft RIA, the benefits of BETTA had been assessed over an indefinite period into the future. This was felt to be excessive by one respondent.

6.3.2 Discussion: It is probably unrealistic to imagine that in the absence of the current BETTA reforms, the benefits that these are expected to deliver would never arrive.

6.3.3 DTI/Ofgem Conclusion: The final RIA uses a 20 year time horizon to estimate the benefits and sensitivity is shown to the use of a 10 year horizon.

6.4 Scottish prices already regulated to NETA levels:

6.4.1 The draft RIA said that BETTA would increase competition in electricity generation and supply in Scotland and that the benefits could be worth some £16 million per annum, equivalent to about 1% of average final prices to Scottish consumers. Four of the responses agreed that BETTA would increase competition in Scotland, whilst the others expressed no view. However, the two Scottish companies felt that wholesale and retail prices in Scotland might rise due to BETTA because wholesale prices in Scotland are already capped at England & Wales levels and also because top up and spill prices for independent generators and suppliers in Scotland are regulated at levels less onerous than imbalance prices under NETA.

6.4.2 Discussion: There is no simple way to assess the extent to which BETTA will improve competition in generation and supply in Scotland and the impact this will have on prices. The draft RIA recognised that prices in the Scottish market are already regulated with reference to those in England & Wales. It is also acknowledged that current imbalance prices in Scotland are regulated in a manner that is likely to be less burdensome to parties in imbalance than exposure to imbalance prices at the levels seen in England & Wales. However, it is also important to note the following:

- In general, competition is more likely to produce economically efficient prices than regulation. Where wholesale prices are regulated, there is less incentive for individual suppliers to seek better terms;
- Regulation of wholesale and imbalance prices in Scotland is by agreement with the incumbent suppliers in each region and not by means of formal obligations set out in licence conditions. This makes it less likely that regulated prices would promote the interests of independent players and also leaves those independent players subject to considerable uncertainty over their future competitive positions;
- Since July 2002, changes to the calculation of imbalance prices under NETA have been made which have had the effect of reducing the spread between System Sell Prices and System Buy Price⁵. This means that differences between Scottish imbalance prices and NETA ones will have been reduced;
- Imbalance payments make up only a very small part of the revenue for most generators and the costs of most suppliers. Some increase in imbalance prices for independent players could still be consistent with greater competition and lower prices overall;

⁵ Reduction of the Balancing Reserve Level and shorter gate closure, both came into effect in July 2002. In the 6 weeks before the changes the average spread between system sell and system buy price was some 2.1 p/kWh. In the 6 weeks after both the changes, the average spread was about 1.2 p/kWh.

6.4.3 DTI/Ofgem Conclusion: The responses have not identified any issues that were not taken into account when the draft RIA was prepared. Nonetheless, there is a general view that the benefits for increased competition in generation and supply are more likely to have been overstated than understated. In view of the fact that this is the largest single source of benefits, and recognising the inevitable uncertainties, the final RIA considers the sensitivity of results to lower benefits in this area.

6.5 Interconnector capacity:

6.5.1 A number of the responses made the point that BETTA would not have much impact on competition in Scottish markets if interconnector capacity was a significant constraint on physical transfers into and out of Scotland. One respondent felt that benefits from increased competition in generation and supply between Scotland and England & Wales should more properly be ascribed to the increased capacity of the interconnector.

6.5.2 Discussion: It is accepted that increasing interconnector capacity will increase competition, but the degree to which it does so could be limited if different trading arrangements were to inhibit the interconnector being used in the most efficient manner. For this reason, it does not seem appropriate to ascribe all such benefits to the interconnector itself. According to NGC, the capacity of the interconnector will be expanded from 1200 MW to 2200 MW by the winter of 2003/4, so the increased capacity will be available almost from the start of BETTA. Whilst there is no certainty that this extra capacity will entirely remove the transmission constraint, some recent work⁶ has indicated that, taken together with the interconnector between Scotland and Northern Ireland, it should be sufficient to equalise prices between the regions most of the time.

6.5.3 DTI/Ofgem conclusions: It seems probable that from next winter, Scotland should have sufficient interconnection to avoid capacity constraints for most if not all of the time. It is therefore thought unlikely that absence of interconnection capacity would significantly diminish the potential benefits of BETTA to competition in generation and supply in Scotland.

6.6 Balancing Costs:

6.6.1 One respondent argued that that current annual cost of balancing in Scotland was £36 million, rather than the £50 million figure used in the draft RIA. Two respondents made the point that generators in Scotland already compete to provide balancing services to the England & Wales market and that in view of this actual competition, further cost reductions would not arise because of BETTA.

6.6.2 Discussion: It is difficult to be certain of the costs of balancing services in Scotland because there is currently no transparent market in their provision. The estimate of £50 million was based on the level of costs in England & Wales. In view of the uncertainties, it is appropriate to consider the sensitivity of the results to the lower figure proposed in response to the draft RIA.

⁶ Conclusion of a presentation by Prof. Richard Green (University of Hull) – to an Energy Modelling Workshop held by OXERA on 18th September 2002. The conclusion was based on ongoing work that has yet to be published.

6.6.3 It is accepted that Scottish generators currently compete to provide balancing services to the England & Wales system. However, it is less clear that market participants in England & Wales are able to compete in the provision of balancing services in Scotland.

6.6.4 Finally, a respondent argued that Scottish generators currently provide a contribution to national reserve for no explicit charge. If this is so, although it is not clear that it is the case, these generators are likely to be recovering the costs through some element of their regulated charges. Consequently, making the charges explicit under BETTA would not increase overall costs of provision or overall charges to consumers.

6.6.5 DTI/Ofgem Conclusion: The responses have not made a convincing case that there is currently effective competition in the provision of balancing services in Scotland. However, it is possible⁷ that the draft RIA over-stated the scale of this market, and hence the likely cost savings, and it is appropriate to consider the implications of the lower level of costs suggested.

6.7 Scottish system operation Costs:

6.7.1 The draft RIA estimated that system operation costs in Scotland are currently some £9.6 million per annum and that savings of about 50% in these costs could be expected. Responses from the Scottish companies argued that:

- The current costs were significantly less than those in the draft RIA and the scope for savings consequently less;
- Savings would be offset by the extra regulatory burden of needing to manage and regulate separate system operator and transmission owner functions.

6.7.2 Discussion: The estimate of system operation costs in Scotland given in the draft RIA was based on data provided to Ofgem for price control purposes and comprised £4.6 million per annum for system operation and £5.0 million per annum for settlement.

6.7.3 In particular, it was argued by respondents that the £4.6 million figure covered a range of activities that went beyond those that would be covered by the GB system operator and that costs attributable to the latter activities would amount to only about 10% of the total. On the other hand, it is Ofgem's view that the £4.6 million figure reasonably reflects the current costs of system operation in Scotland. In either case, it still seems reasonable to expect a significant portion of current costs to be saved as a result of having one system operator for GB rather than three.

6.7.4 Since the draft RIA, Ofgem have revised the estimate of annual settlement costs to £4 million per annum and their view is now that the scope of savings to be expected is a good deal less than 50%.

⁷ Although by no means certain.

6.7.5 It is recognised that new commercial relations between the GB system operator and the transmission asset owners will need to be established, maintained and regulated. Estimates of the costs of doing this are set out in Section 8.5 below.

6.7.6 DTI/Ofgem Conclusion: Whilst not entirely accepting the Scottish companies' views that existing system operation costs are as low as claimed, lower costings are used for this RIA in order to provide a cautious assessment of the benefits of BETTA. It is assumed that system operation costs amount to £1 million per annum instead of £4.6 million and that 50% of these costs can be saved. It is also assumed that £0.5 million per annum (12.5%) can be saved from current settlement costs of £4 million per annum.

6.8 Interconnector Costs:

6.8.1 The draft RIA put the costs of administration of the England – Scotland interconnector at £2 million per annum and judged that the whole of these costs could be avoided under BETTA as the interconnector would become just one part of a unified GB transmission network. The Scottish companies agreed that these administration costs could be avoided but argued that they amounted to only £0.5 million per annum.

6.8.2 Discussion: The figure of £2 million was derived from information submitted to Ofgem for price control purposes, but the Scottish companies argued that it included one-off costs for enabling the interconnector to operate under NETA.

6.8.3 DTI/Ofgem Conclusion: Whilst not necessarily accepting that current interconnector costs are as little as £0.5 million per annum, it is proposed to use that figure in this RIA in the interests of producing a cautious estimate of the benefits.

6.9 Locational Signals:

6.9.1 The draft RIA argued that a single, consistent and co-ordinated set of locational price signals across GB, and the absence of special access arrangements for the England-Scotland interconnector would improve efficiency in the location of generation plant, some electricity demand and investment in new and replacement transmission capacity. The scale of this benefit was estimated as £9.5 million per annum, equal to 5% of annual investment in the Scottish transmission networks.

6.9.2 The Scottish companies argued that:

- Annual investment in the Scottish transmission networks is nearer £40 million per annum than the figure of £190 million implied by the draft RIA;
- Any increase in grid access costs in Scotland would harm the prospects for meeting the government's targets for renewables;
- There was no evidence that locational signals in England and Wales had had any significant impact on locational decisions.

6.9.3 Discussion: It is accepted that the estimate of annual investment in the Scottish transmission networks used in the draft RIA was too high. It included investment in distribution networks as well. The appropriate figure is about £40 million per annum.

6.9.4 BETTA will not of itself bring about changes to the system of charging for transmission access and losses in England and Wales. It will simply enable these systems to be extended to cover Scotland as well on a consistent basis. It is therefore not appropriate to take into account any possible changes to these systems that may occur in future. Any such changes would be subject to the usual consultation processes.

6.9.5 It is not the purpose of BETTA to provide special assistance to any particular types of generation or to generation in any particular area of GB. Indeed, the aim of BETTA is to ensure a level playing field between generation in all parts of the country by exposing all generation to locational price signals based on a single and coordinated approach. It is possible that such signals would adversely affect renewable generation in some parts of the country compared to renewables elsewhere. The government's policy is to achieve a 10% share for renewables by 2010 subject to the costs to consumers being acceptable. A consistent set of price signals for generation across the country would help to clarify what the additional costs of renewables are and hence help government to decide what level of costs would be acceptable⁸. Further discussion of the impact of BETTA on renewables is in Section 11.2.

6.9.6 Although the comment has been made that existing locational price signals in England & Wales have not significantly affected the location of generating plant, no reasons have been suggested why locational signals would not have some impact on generators' decisions. It is difficult to know what the configuration of generating plant would have been in the presence of different locational signals, but in general terms, there seem no reasons to suppose that locational price signals would not have an impact in the same manner as other price signals in the marketplace.

6.9.7 DTI/Ofgem Conclusions: It is appropriate to use £40 million per annum as the basis for a 5% saving in transmission costs that might arise from a consistent set of locational price signals across GB under BETTA. Considerations relating to possible future changes in GB-wide locational price signals for transmission and to renewables generation do not affect this aspect of the estimated benefit from BETTA.

6.10 Other Impacts

6.10.1 Responses to the draft RIA also raised some more general points about the potential economic benefits of BETTA. The main ones were:

⁸ The Government has already committed to a buy-out price in the Renewables Obligation of at least 3 p/kWh for the period up to 2026/27. However, it retains the option to increase the buy-out price in future.

- The benefits of BETTA would be less than their potential so long as the Nuclear Energy Agreement continued to account for a significant percentage of the Scottish market;
- The benefits of BETTA would not be maximised if a merger between NGC and Lattice were to lead to the GB system operator having undue incentives to boost the use of gas for electricity generation;
- Differences in planning and other regulations between England and Scotland would inhibit the formation of a level playing field between the two markets;
- No account taken of new losses and transmission access arrangements.

6.10.2 Discussion: The Nuclear Energy Agreement (NEA) was recently modified by agreement between the parties. One consequence of these changes, which were reviewed and approved by Ofgem, was to change the termination date for the contract from 1st April 2005 to 1st April 2006 or the date of BETTA go-live, whichever is sooner. As such, the NEA and BETTA will not co-exist. By introducing a more competitive wholesale generation market in Scotland, BETTA will ensure that the nuclear power stations based in Scotland (which are currently owned by British Energy) obtain a fair market price for their output when the NEA⁹ expires in 2006 at the latest. Whether that price would be more or less than the stations would have obtained in the absence of BETTA is unclear. To the extent that they are better able to access a range of potential buyers, the price could be higher, but to the extent that competition from other generators reduces the overall level of market prices, the price could be lower. In neither case is the impact likely to be large, mainly because – in the absence of BETTA – Scottish wholesale prices would have been regulated with reference to prices in the more competitive England and Wales market. The impact of new transmission charges on British Energy cannot be assessed until the new structure of charges is determined. With power stations widely located across GB, however, the overall impact is unlikely to be large.

6.10.3 Notwithstanding the merger between Lattice and NGC, the electricity and gas system operation and ownership roles continue to be separate businesses, subject to separate regulation. This will ensure that NGC does not use its position to discriminate in favour of gas-fired generation.

6.10.4 Planning issues are a matter for the relevant authorities in the different regions and are beyond the scope of BETTA.

6.10.5 Paragraph 2.6 makes it clear that proposals for new GB-wide arrangements for transmission losses and access will be consulted on in due course and are not covered by this RIA.

7. Revised Assessment of Benefits:

7.1 In this section, the estimation of benefits in the draft RIA is updated in the light of responses to the consultation and other developments.

⁹ The NEA effectively awards British Energy's Scottish plant a premium price for its output compared to Scottish wholesale prices.

7.2 Following Section 6.3 above, all ongoing benefits are discounted over a 20 year horizon in this section. The impact of reducing this to a 10 year horizon is assessed in Section 9.

7.3 Benefits from Increased Competition in Generation and Supply:

7.3.1 The draft RIA noted that BETTA would increase competition in the Scottish wholesale electricity market in the following ways:

- Ensure independence of generation and supply activities from system operation;
- Ensure that all generators and suppliers face the same, market-based, balancing charges;
- Encourage independent suppliers to seek cheaper sources of generation rather than relying on generation released at regulated prices;
- Reduce the transactions and learning costs of doing business in Scotland.

7.3.2 The draft RIA considered that these effects could lead to final prices to Scottish consumers being some 1% lower than otherwise, with a value of £16 million per annum. This excludes the effect of any possible changes, as a result of the introduction of GB wide transmission charging under BETTA, to the way in which the costs of the transmission system are recovered.

7.3.3 The two incumbent Scottish companies currently account for some 95% of generation capacity in Scotland and about 71% of supply to domestic consumers in Scotland. The discussion in Section 6.4 notes that most respondents agree that BETTA will increase competition in the Scottish wholesale market, although the extent of that benefit was felt to have been exaggerated in the draft RIA. The extent to which increased competition will lead to prices being lower than otherwise remains inevitably uncertain, but for the purposes of this RIA, a reduced impact equivalent to 0.5% of retail prices is considered a reasonable and cautious estimate. This would be worth £8 million per annum.

7.4 Greater Competition in Balancing Services:

7.4.1 The draft RIA noted that BETTA would improve competition in the supply of balancing services to the system operator in Scotland by:

- Ensuring all offers of balancing services were treated even-handedly;
- Encouraging competition between balancing service providers in Scotland and in England & Wales;
- Providing clear signals of balancing costs to market participants, encouraging them to improve their management of balancing service requirements.

7.4.2 The draft RIA estimated the benefit of increased competition as being 5% of the annual cost of balancing in Scotland which in turn was estimated to be £50 million. This gave an annual benefit of £2.5 million.

7.4.3 Section 6.6 notes that the current costs of system balancing in Scotland may have been overstated in the draft RIA, with an alternative figure of £36 million per annum suggested. Responses from the Scottish companies also suggested that savings were likely to be less than 5% although alternative estimates were not suggested. Combining the figure of £36 million with a 5% saving gives an annual benefit of £1.8 million.

7.5 Improved Locational Signals:

7.5.1 The draft RIA said that BETTA would lead to a single coordinated set of locational price signals operating throughout GB. The efficiency benefits arising from this were estimated at 5% of annual capital expenditure on the transmission networks in Scotland (although a part of these savings might come via lower investment in England & Wales). This benefit was estimated at £9.5 million per annum.

7.5.2 Section 6.9 notes that annual investment in the Scottish transmission network is in fact nearer £40 million than £190 million per annum. Consequently, a 5% saving would be worth £2 million per annum. Although there is a degree of arbitrariness about the 5% figure, the overall benefit of £2 million per annum represents less than 1% of annual investment in the GB transmission network as a whole. This does not seem unreasonable as an estimate of the benefit of a coordinated set of locational price signals over the medium to longer term.

7.6 Economies of Scale in System Operation:

7.6.1 The draft RIA said that savings could be expected from the fact that under BETTA there would be just one system operator and one settlement system in GB, as opposed to three at present. The savings were expected to amount to £5 million per annum.

7.6.2 Section 6.7 considers the basis of the £5 million per annum estimate in the light of comments received and concludes that a more cautious, and robust, estimate would be closer to £1 million per annum.

7.7 Avoidance of Interconnector Arrangements

7.7.1 The draft RIA noted that BETTA would remove the need for separate commercial arrangements for interconnector between England and Scotland and that costs savings as a result would be £2 million per annum.

7.7.2 It is widely agreed that interconnector administration costs will be avoided through BETTA but in the light of comments received, a more cautious estimate of the scale of these benefits is adopted, at £0.5 million per annum.

7.8 Summary of Economic Benefits:

7.8.1 The following table summarises the expected benefits from BETTA as discussed in the paragraphs above.

	Benefit £ million/year
Greater competition in generation and supply	8.0
Greater competition in balancing services	1.8
Improved locational signals	2.0
Economies of scale in system operation	1.0
Avoidance of interconnector arrangements	0.5
TOTAL	13.3

When these amounts are summed over 20 years and discounted at 6% per annum in real terms, the present value of the total benefits amounts to £152.6 million.

8. Costs:

8.1 The draft RIA did not contain an estimate of the overall costs of implementing BETTA, although it noted that costs falling on Ofgem were expected to be some £8 million.

8.2 Estimates of costs have now been made, drawing to a large extent on Ofgem's knowledge of the BETTA development process and their previous experience with the development and implementation of NETA.

8.3 The draft RIA noted that costs were expected to fall in the following main categories:

- Development of central systems to support the GB Balancing Mechanism and settlement and the operational actions of the GB system operator;
- The creation and maintenance of interfaces between the GB system operator and transmission asset owners;
- Costs for market participants in preparing for BETTA, including participation in the consultation and design process, and ongoing participation costs;
- Ofgem costs.

The following sections deal with each of these in turn. In addition, a section is included to cover the costs borne by DTI in preparing and taking forward legislation.

8.4 Central Systems:

8.4.1 This is the largest cost item. It covers the development of the system that the GB system operator will need receive, accept and settle bids and offers, and issue operational instructions. These costs relate mainly to the extension of the IT system already underpinning the operation of NETA in England & Wales. The costs will include data transfer and network validation in respect of generation and demand situated in Scotland.

8.4.2 The above costs are expected to be of the order of £20 million, although there is still a good deal of uncertainty regarding the exact figure. This figure includes costs relating to contract negotiation, legal expenses, the absorption of the existing Scottish settlement system, scheduling, despatch and billing systems.

8.4.3 In addition, it will be necessary to keep the existing Scottish settlement system operational for some 18 months following the introduction of BETTA in order to ensure all pre-BETTA transactions have been fully reconciled and settled. The annual costs of this system is some £4 million, so an 18 month overlap with BETTA will lead to extra costs of some £6 million.

8.5 Interfaces between GB system operator and transmission asset owners:

8.5.1 Under BETTA, although final decisions have yet to be taken, it is likely that there will continue to be three separate transmission asset owners. Each of these will need to develop and maintain commercial and contractual links with the GB system operator. Until now, such links have largely been internalised within the three existing companies that combine system operator and transmission asset owner functions within their own regions¹⁰.

8.5.2 The costs of establishing these new relationships is expected to be of the order of £4 million with ongoing costs of some £1.5 million per annum.

8.5.3 The draft RIA also suggested that there could be additional costs arising from the need for Ofgem to oversee and regulate these new interfaces. However, these costs are considered to be very small, not least because the activities concerned are already subject to regulatory oversight. Furthermore, any small additional regulatory costs are likely to be offset by the reduced need under BETTA for regulation of wholesale and imbalance prices in Scotland.

8.6 Costs for Market Participants:

8.6.1 The design of BETTA has already been, and will continue to be, subject to consultation with industry participants across GB. However, since BETTA will involve minimal changes for market participants in England & Wales, the bulk of the effort required to assess and respond to proposals will fall on companies operating in Scotland. Taking account of the levels of industry response to date, Ofgem estimate that total costs for participation in consultation will amount to some £2.5 million, of which about £2 million will be incurred by Scottish companies.

8.6.2 Market participants in England & Wales will need to make minor alterations to their systems and to their contractual arrangements as industry-wide agreements such as CUSC and BSC¹¹ are extended to include Scotland. These changes, which will be of a largely standard nature, could cost about £1 million.

8.6.3 Market participants in Scotland will need to introduce systems to interact with the BETTA central system and operate those systems thereafter. The costs of development are estimated to be some £4 million with ongoing operating costs of some £0.5 million per annum. In reaching these estimates, account has been taken of the fact that there are currently no electricity suppliers or generators¹² active in

¹⁰ National Grid Company, Scottish Power and Scottish and Southern Energy.

¹¹ Connection and Use of System Code and Balancing and Settlement Code.

¹² This does not include small, license exempt, generation which would continue to have the choice of participation in central systems or selling output through bi-lateral contracts with licensed suppliers.

Scotland who are not either active in the England and Wales market or closely associated with parties who are active in that market.

8.7 Ofgem Costs:

8.7.1 The costs to Ofgem of designing and coordinating the BETTA arrangements continue to be estimated at around £8 million.

8.8 DTI Costs:

8.8.1 The cost to the DTI of preparing the BETTA legislation and taking it through Parliament is estimated to be in the order of £0.2 million.

8.9 Total Costs:

8.9.1 The costs set out in the previous sections are summarised in the following table:

	Development Costs £ million	Ongoing Costs £ million/year
Central Systems	26.0	-
Interface between GB SO and asset owners	4.0	1.5
Market participants	7.5	0.5
Ofgem	8.0	-
DTI	0.2	-
TOTAL	45.7	2.0

When ongoing costs are summed over 20 years and discounted at 6% per annum in real terms, the present value of the total costs comes to £68.6 million.

8.9.2 There remains considerable uncertainty over the costs of BETTA. Sensitivities to the costs shown above are examined in Section 9 below.

8.9.3 In broad terms, efficiently incurred costs associated with BETTA implementation are expected to be passed through to consumers by one means or another¹³. The appropriate mechanism for cost recovery is expected to be subject to further consultation by Ofgem / DTI.

9. Comparison of Costs and Benefits and Sensitivities

9.1 From sections 7.8 and 8.9, we have estimates of total benefits and costs as follows:

Benefits:	£152.6 million
Costs:	£ 68.6 million

On this basis, the benefits of BETTA are approximately double the costs and are worth some £84 million, or around £7 million per annum.

¹³ Costs borne by the DTI will be met by taxpayers rather than electricity consumers.

9.2 By way of illustration, if all the costs and benefits of BETTA were to be spread evenly over all Scottish electricity consumers, but only Scottish consumers, it is conservatively estimated that the average price of electricity in Scotland would be about half a percent lower than otherwise.¹⁴ BETTA will thus make a small contribution to the reduction of “fuel poverty” in Scotland, although the exact distribution of the future benefits remains uncertain at this stage.

9.3 The above estimates assume that ongoing costs and benefits are summed and discounted over 20 years. If this is restricted to 10 years than the figures become:

Benefits:	£97.9 million
Costs:	£60.4 million

The difference between the costs and benefits is smaller because in future years the benefits strongly outweigh the costs (£13.3 million per annum against £2 million per annum) and fewer future years are taken into account. Nonetheless, the benefits remain some 60% greater than the costs.

9.4 Estimates of costs and benefits for a project such as BETTA are necessarily uncertain. Efforts have been made in this assessment to take a cautious view of the benefits. The balance of costs and benefits shown above indicate a considerable margin for error before costs start to exceed benefits. The potential increases in costs, or decreases in benefits that would yield equivalence between costs and benefits are summarised in the following table:

	Potential Cost Increase %	Potential Benefit Decrease %
Assessment over 20 years	122	55
Assessment over 10 years	62	38

It is clear that there is a substantial margin for increasing costs or reducing benefits before BETTA would cease to be economically justified.

10. Consultation with small business

10.1 The vast majority of small businesses in Great Britain will only be affected by BETTA to the extent that it leads to changes in the prices they pay for electricity. Paragraph 9.2 indicates that, by way of illustration, if all the costs and benefits of BETTA were to be allocated only to consumers in Scotland, it would lead to a reduction in prices of about half of one percent. In practice it is expected that some of the net benefits of BETTA will also accrue to customers in England & Wales, but the impact on electricity prices will be very small.

10.2 Small businesses in the electricity sector will be affected by BETTA. In broad terms it is anticipated that opening up the electricity market in Scotland to more

¹⁴ This does not include any of the possible redistributive effects referred to in section 5.4 refers.

effective competition will improve the prospects for smaller companies operating in that market which remains dominated at present by the incumbents. The more competitive market in England & Wales has seen considerable new entry in both generation and supply, although it is also recognised that there has been a degree of consolidation more recently suggesting that electricity generation and supply may be activities that exhibit economies of scale that make them less suitable activities for small businesses.

10.3 Concern was expressed by Energywatch that smaller players operating in the Scottish market but not operating in England & Wales might be exposed to significant costs. However, as noted in Paragraph 8.6.3, there are no licensed generation or supply companies operating in Scotland who are not either active in the England & Wales market or closely associated with parties who are active in that market. Smaller companies operating in both Scotland and England & Wales should benefit from avoiding the need to understand and comply with two different sets of market arrangements.

10.4 A group of small businesses of particular interest is that of small generators producing electricity from renewables or combined heat and power installations. The impact of BETTA on this group is considered further below.

10.5 Further detailed consultation by Ofgem / DTI is being undertaken to finalise the details of BETTA. In these consultations, the views of all electricity consumers, business and private individuals, are sought and copies of consultation documents are sent to organisations representing consumer interests such as Energywatch.

11. Environmental Impact

11.1 General

11.1.1 BETTA is not a measure whose primary purpose is to promote benefits to the environment. However, by promoting effective competition and hence the more efficient use of all resources, and also the better use of resources in the monopoly activity of electricity transmission, BETTA could have a generally, if mildly, positive environmental impact. For example, the improved locational signals under BETTA should lower the barriers to entry faced by smaller generators (many of them renewable) in Scotland and should also reduce the need for investment in costly and unsightly transmission facilities.

11.1.2 To the extent that BETTA leads to lower electricity prices for consumers, there could be adverse environmental effects as consumers choose to use more electricity. It has been cautiously estimated that the net impact of BETTA on consumers' bills in Scotland might be of the order of half of one percent, with significantly smaller impact in England & Wales¹⁵. Price differences of this magnitude are unlikely to lead to material increases in electricity use given that the price elasticity of demand for electricity is generally estimated to be low (in absolute terms).

¹⁵ See Paragraph 9.2.

11.1.3 It has been argued¹⁶ that, in England & Wales, NETA has given rise to increases in greenhouse gas emissions as generators run more plant partly loaded in order to avoid exposure to imbalance prices. To the extent that this is the case, it is already likely to be affecting fossil fuelled plant in Scotland as the Scottish companies face exposure to England & Wales imbalance charges in relation to electricity passing through the interconnector. And the enhanced competitive pressures under BETTA should sharpen incentives on generators to minimise fuel use.

11.1.4 In addition to its principal objective to protect the interests of consumers by promoting effective competition, Ofgem also has other statutory duties which include having regard to the effect on the environment in carrying out certain of its functions and it will also have regard to guidance on social and environmental matters issued by the Secretary of State. Ofgem will thus be taking account of environmental issues as they move towards deciding detailed aspects of BETTA and, in future, considering possible changes to ways of charging for GB-wide transmission access and losses.

11.2 Impact on renewables and combined heat and power (CHP):

11.2.1 The primary purpose of electricity transmission and trading arrangements is to establish a framework for a competitive electricity market which meets the needs of consumers. However, it is also very important that electricity trading and transmission arrangements are not biased against environmentally friendly generation or place unnecessary barriers in its way. In addition there is already a range of Government measures in place to encourage environmentally beneficial forms of generation. Renewables Obligations have recently been introduced in both England & Wales and Scotland and both renewables and good quality CHP are exempt from the Climate Change Levy (CCL).

11.2.2 It has been claimed, and some responses to the draft RIA also took this view, that NETA is biased against small renewable and CHP generation in a number of ways such as the following:

- It is excessively harsh in its treatment of unpredictable generation. Many renewables (especially wind) and some CHP come into this category;
- NETA is complex to understand and, by requiring 24 hour and 7 day a week monitoring, is costly for small companies; and
- NETA has led to reduction in the value of “embedded benefits” which are accessible by smaller generators not directly connected to the transmission networks.

11.2.3 On 4th April 2002, DTI published its response to an earlier consultation document on how to help smaller generators operate more effectively under NETA¹⁷. It noted that progress had been made in a number of areas since the consultation and proposed further steps to assist smaller generators in the following areas:

¹⁶ For example, the article on pages 18-20 in the April 2002 edition of the journal “Power UK”.

¹⁷ Government Response to the Consultation on NETA and Smaller Generators of 1 November 2001. Published by DTI on 4th April 2002.

- Reducing the period of gate closure under NETA;
- Considering the case for and possibility of unbundling embedded benefits;
- Assessing the need for comprehensive guidance for small generators and provide funding if necessary; and
- Assessing the need for standard contracts for smaller generators.

11.2.4 Progress has been made in a number of these areas. The period of gate closure was reduced to one hour in July 2002. Regarding embedded benefits, Ofgem has requested information from licensed electricity suppliers to ascertain what localised abuses of market power may be occurring, if any. On 10th December 2002, Ofgem launched a new website to provide smaller generators with factual and simplified information on their trading options under NETA.

11.2.5 On 24th July 2002 Ofgem published its Review of the first year of NETA¹⁸. This review included the findings of a survey of smaller generators, which were:

- Prices for smaller generators had fallen, as had those for all generators, but were either in line with prices for other generators or were much higher where they attract Government subsidy;
- Smaller generators reported that they were producing about the same amount of electricity as they had done before NETA;
- Few smaller generators had chosen to become BSC parties;
- Most small generators continued to sell their output to their local supplier;

11.2.6 Other measures have also been introduced since the draft RIA which are likely to benefit unpredictable generation. Reduction of the Balancing Reserve Level in July 2002 has contributed to a reduction in the spread between system sell and system buy prices. BSC¹⁹ Modification P78 was approved by Ofgem in September 2002 for introduction in late February 2003. This will also reduce the spread between system sell and system buy prices, by basing the calculation of the “reverse price”²⁰ on prices in short term markets rather than accepted Balancing Mechanism bids or offers.

11.2.7 One respondent to the draft RIA said that, “difficulties for renewables [under NETA] should be addressed prior to implementation of BETTA.” Both DTI and Ofgem continue to work to ensure that the trading and transmission arrangements in England & Wales are not biased against renewables and CHP. Any changes that are introduced to the England & Wales arrangements in pursuit of that objective will of course be incorporated in to the BETTA arrangements covering Scotland.

11.2.8 There are a number of other ways in which BETTA could affect renewables and CHP. BETTA could help small generators in the following ways:

- All sources of generation throughout GB will have fair and transparent access to the transmission system;

¹⁸ The Review of the First Year of NETA. A Review Document. Published by Ofgem on 24th July 2002.

¹⁹ Balancing and Settlement Code.

²⁰ The reverse price is that relating to imbalances in the opposite direction to the overall system imbalance.

- A single set of coordinated locational price signals across GB will facilitate the planning of any network reinforcement that may be required to accommodate additional renewable generation and enable the costs of such reinforcement to be allocated in a fair and appropriate manner;
- Companies operating in both England & Wales and in Scotland will only have one set of trading and transmission arrangements to master instead of two. This will reduce a barrier to entry;
- Use of Consolidators is one way that small generators can manage imbalance risks under NETA. BETTA should make it easier for consolidation to combine generation in Scotland with generation in England & Wales and thereby increase its potential benefits;
- Companies wishing to trade between Scotland and England will no longer have to worry about interconnector access since this will become incorporated in their transmission use of system charges. This will remove a barrier to entry and enhance the size of the market for energy produced by small and renewables generators in Scotland;
- By increasing effective competition in electricity supply, BETTA could increase the number of potential purchasers of the output of smaller generators in Scotland and thus improve their chance of negotiating better prices.

11.2.9 In general, the above effects would reduce barriers to entry for smaller generators in Scotland and one response to the draft RIA said that, “BETTA should reduce barriers to entry [for renewables] in Scotland” whilst another said that, “[BETTA] will be a significant benefit for the development of renewable energy schemes” and that, “although BETTA will present some uncertainties for small generators, particularly through exposure to cash out prices in the Balancing Mechanism, the benefits for the development of new renewables projects will be significant”.

11.2.10 The draft RIA said that an integrated and coordinated set of GB-wide transmission price signals and incentives should improve the prospects of new transmission capacity being provided where there is an economic case for doing so and that this could benefit renewable generation in Scotland. However, some responses to the draft RIA, and in particular those from the incumbent Scottish companies, argued that there was a risk that an integrated set of locational price signals would penalise generation in Scotland, due to its remoteness from the main centres of GB demand, and that in view of the substantial potential for renewable generation in Scotland, achievement of the Government’s targets for renewables would be jeopardised.

11.2.11 An integrated and coordinated set of transmission price signals should help targets for renewable generation be met at the lowest overall cost, including the cost of transmission reinforcement where necessary. It may, or may not, be the case that such an outcome involves less use of Scottish renewables than currently envisaged by some market participants. Companies will be encouraged to develop renewables projects in areas where transmission reinforcement would not be required whilst transmission asset owners should be better able to plan transmission reinforcement where it is needed with the costs being allocated in a fair and transparent way to transmission system users through locational price signals.

11.2.12 BETTA does not require any particular set of locational price signals and it will be a matter for Ofgem, in consultation with the industry, to devise a fair and transparent system for transmission access and pricing and for the charging of transmission system losses. In devising such a system, Ofgem will need to take account of the need to avoid discrimination against any particular source of generation and the need to comply with its environmental duties (see Paragraph 11.1.4) as well as seeking an efficient pricing system which protects the interests of consumers.

11.2.13 On balance it is hard to be certain of the overall environmental impact of BETTA. Some of the effects operate in one direction and others in the other direction and opinions expressed in response to the draft RIA on this matter were mixed. This suggests that the overall net impact of the various effects discussed above seems likely to be small even if its direction is uncertain.

12. Competition Assessment:

12.1 The purpose of BETTA is to facilitate the creation of a single wholesale electricity market for GB, with common rules and charging arrangements for connecting to and using the transmission system and with balancing services procured by a single system operator for GB. This will reduce the differences between the interconnected system in England & Wales and Scotland and it is envisaged that BETTA will improve competition and facilitate the exploitation of economies of scale in requiring only a single operator to control the transmission system. The competition assessment undertaken below considers the effects that BETTA would have on competition and includes a summary of the views expressed by stakeholders in response to the draft RIA.

Would the costs of BETTA affect some firms substantially more than others?

12.2 To the extent that market participants face direct costs, these are expected to fall mainly on participants in Scotland since it is the Scottish market that is being targeted for greater competition. It is yet to be decided how the costs incurred by the new GB system operator will be recovered.

12.3 BETTA will result in a transfer of functions to the GB system operator from existing transmission companies. Clearly, this will only affect transmission companies, and could also be expected to transfer the value of regulatory incentives associated with these activities under the existing regime. Electricity transmission is accepted to be a natural monopoly activity requiring ongoing regulation.

Is BETTA likely to affect market structure, changing the number / size of firms?

12.4 BETTA will make it easier for new entry to a range of electricity market activities in Scotland where two large companies currently dominate the market²¹. The main activities affected will be electricity generation and supply, although other activities, such as the provision of balancing services by demand side customers, may also be affected. Both of the two large companies operate a wide range of

²¹ See Paragraph 2.3 for information on current market structure.

interlocking electricity market activities (including generation, distribution, transmission, system operation and supply) that it might be able to use to cross subsidise activities, limit transparency and discourage entry.

12.5 While it is difficult to anticipate how parties will avail themselves of these new commercial opportunities, the market structures that evolve as a result of BETTA are expected to be more dynamic.

Would BETTA lead to higher set up costs for new or potential firms compared with the costs of existing firms?

12.6 BETTA will reduce the set up costs for new or potential firms since the differing sets of market rules that exist currently for Scotland and England & Wales, and in respect of the interconnector between the two systems, will be rationalised under one set of trading rules. Further, these rules will be subject to open and transparent processes for consultation and modification, with regulatory oversight. The need to become familiar with fewer and more transparent rules will be of particular benefit to firms wishing to operate in both Scotland and England & Wales, although to the extent that each system is not entirely independent of the other at present, there will also be benefits for participants wishing to operate in just one region.

Would BETTA lead to higher ongoing costs for new or potential firms compared with the costs for existing firms?

12.7 BETTA will ensure that new entrants face the same costs as existing firms of a similar nature. This is not the case at present in Scotland where incumbents face different rules from those applied to independent generators and suppliers and therefore face different costs and risks. Partly as a result of these arrangements there has been very little entry into the Scottish markets over the past decade.

Are the electricity wholesale markets characterised by rapid technological change?

12.8 Rapid change has not been evident in recent years. Generating technologies employed have not changed a great deal. The main area of change has been in market liberalisation which has permitted electricity consumers to choose between suppliers and enabled competition between different generators in providing power for competing suppliers.

12.9 Looking forward, however, a higher degree of technological change might be expected, first in the way that electricity generation responds to environmental pressures that are expected to become tighter and secondly as the relationships between customers, suppliers and generators adapt to the new technologies and market arrangements.

Would BETTA restrict the ability of firms to choose the price, quality, range or location of their products?

12.10 No. The greater competition arising from BETTA should lead to a greater range of products being offered.

Views of Respondents to draft RIA.

12.11 There was some disagreement among responses to the draft RIA on whether BETTA would increase competition in the Scottish electricity market.

12.12 The incumbent Scottish companies were sceptical of the ability of BETTA to increase competition, noting that existing regulatory arrangements for wholesale and balancing prices in Scotland enabled rival participants to enter the market and arguing that the replacement of these arrangements could lead to increases in the prices paid by rival suppliers and generators. However, one of these companies also noted that “the benefits of BETTA are likely to be longer term, from the establishment of a fair and competitive wholesale market across GB”.

12.13 Other respondents who expressed a view felt that BETTA would increase competition in the Scottish electricity market. One noted that, “the benefits of introducing competition to Scotland should more than offset the costs of establishing that competition”; and another noted that “there is effectively no competition in the Scottish generation market and the Scottish retail market is less well developed than that in England & Wales. BETTA is expected to facilitate greater competition in the generation and supply markets”. A company who responded to the wider May 2002 Consultation Document, but did not comment specifically on the draft RIA, noted that “The existing Scottish electricity trading arrangements represent a significant impediment to extending effective competition in the generation and supply of electricity across the whole of Great Britain.”

12.14 Discussion: It is not altogether surprising that the incumbent companies in Scotland are disputing that BETTA will increase competition. The claim that BETTA would lead to higher costs for competitors has been addressed in Paragraph 6.4.2. It has also been argued in Paragraph 4.1 that in general competition is a more effective tool for promoting consumers’ interests than continued regulation. The fact that potential rivals to the incumbent companies appear supportive of the principle of a common GB wholesale electricity market may be taken as an indication that BETTA will promote competition in Scottish electricity markets.

12.15 **Conclusion on Competition Assessment:** A key objective of BETTA is to improve competition in electricity markets in Scotland. It is clear from the competition assessment that implementation of BETTA would not have a significant detrimental effect on competition within the Scottish electricity market (including generation, transmission, transmission system operation, distribution and supply). This is largely supported by the views expressed during consultation. In certain respects, outlined above, BETTA can be expected to have a positive impact on competition.

13. Enforcement, sanctions, monitoring and review:

13.1 BETTA will be implemented in practical terms through licences and changes to core industry documents. Licence obligations are enforced by Ofgem, and licence breaches can be subject to financial penalties. Licensed parties will be obliged to sign and comply with core industry documents. In addition, signatories to these documents will be bound by the contractual terms therein.

13.2 Licences can be subject to modification proposals by Ofgem, and disputes in respect of proposed modifications can be referred to the Competition Commission. Modifications to core industry documents will have an open and transparent governance process, with regulatory oversight. Participants under BETTA will also continue to be subject to the normal operation of competition law.

14. Summary and Recommendations

14.1 We have estimated the economic benefits of BETTA to be around double the costs of its implementation and that if the net benefit were to be allocated solely to electricity consumers in Scotland, electricity prices in Scotland would be some half of one percent lower than would otherwise have been the case. We also noted that BETTA might result in changes in the distribution of the costs of the transmission system between customers in different regions of GB. It was noted that this might be expected to reduce the contribution of Scottish consumers towards the costs of the GB transmission system.

14.2 It is recognised that assessment of both costs and benefits is subject to considerable uncertainty. An attempt has been made to take a cautious view of potential benefits and it is possible that the benefits could be significantly larger than estimated. Sensitivity analysis has indicated that there is a substantial margin for increasing costs or reducing benefits before BETTA would cease to be economically justified.

14.3 The main effect of BETTA on small businesses will be to reduce slightly the price they pay for their electricity.

14.4 BETTA is not a measure whose primary purpose is to promote benefits to the environment. On balance it is hard to be certain of the overall environmental impact of BETTA. Some effects operate in one direction and others in the other direction. Opinions on the net effect are mixed. This suggests that the overall net impact is likely to be small.

14.5 A key objective of BETTA is to improve competition in electricity markets in Scotland and the analysis undertaken suggests that it will have a generally beneficial impact on competition in those markets.

Signed Declaration

I have read the Regulatory Impact Assessment and I am satisfied that the benefits justify the costs.

Signed:

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Annex A

Comments on the draft RIA were received from:

Confederation of UK Coal Producers

Energywatch

Innogy

London Electricity

Scottish Power

Scottish and Southern Energy

TXU Energy