Annex B

Post Implementation Review (PIR) of The Offshore Installations (Offshore Safety Directive) (Safety Case etc.) Regulations 2015 (SI 2015/0398)

Cost Benefit Analysis

Estimated Costs of the SCR15 Transition

1. Introduction

1. This Post-Implementation Review (PIR) of the Offshore Installations (Offshore Safety Directive) (Safety Case etc.) Regulations 2015 (SCR15) has sought to assess how accurate the transitional costs estimated in the original Impact Assessment (IA)[1] have proven to be. The IA cost estimates were made against the baseline of the compliance costs of the previous Offshore Installations (Safety Case) Regulations 2005 (SCR05).

2. The original IA estimated costs for the transposition of the Offshore Safety Directive[2] in totality and thereby estimated several costs that are out of scope of this PIR, which will focus on the costs of SCR15 only.[3] This PIR will focus only on:

    a. the costs to industry to comply with the new requirements in SCR15, including gold-plating

    b. the costs recovered from industry by the Competent Authority (CA), the Offshore Safety Directive Regulator (OSDR), to assess additional submissions made under SCR15

    c. the benefits of the new requirements in SCR15 (discussed qualitatively[4] in the Evidence Review, which discusses whether SCR15 has met its objectives)

3. The IA assessed both the transitional and ongoing additional costs of SCR15. However, this PIR will evaluate only the one-off costs as the industry only finished transitioning in the summer of 2018 (approximately six months before research on this PIR began) and the regulations have a natural cycle around the five-year review of the Safety Case. As such, the industry has not yet reached a steady-state equilibrium of average ongoing costs that we could evaluate – this is the view of HSE policy, HSE inspectors, OSDR and of industry itself.

4. We have prioritised the largest costs in the IA, but allowed a route in our question sets for respondents to tell us about the costs of any of the smaller changes as well if they chose to.

5. The research method we have adopted has taken a 'funnel' approach – a quantitative consultation of the industry; followed by workshops with industry and inspectors in Aberdeen to delve further into the evidence; and interviews with key consultation respondents to probe and challenge answers for greater understanding. Cost areas where there appeared to be greatest disparity between the original IA and the consultation responses were prioritised for deeper exploration.

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[1] http://www.legislation.gov.uk/uksi/2015/398/impacts

[2] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32013L0030&from=EN

[3] The areas of cost in the IA that this PIR will and will not evaluate are summarised in Annex 1.

[4] The IA did not quantify any additional benefits of SCR15

6. Prior to conducting the research, we discussed our proposed methods with industry trade bodies to check that our methods would be appropriate and that industry could answer the questions we posed. This guided the wording of our questions as well as the timing of the research to ensure we would be able to get the greatest response possible.

7. The IA estimated ranges of costs with a single 'best estimate'. The trade associations we discussed the questions with advised that the questions probe whether the best estimate only was 'about right' or not, rather than the range. Where respondents disagreed with the best estimate, they were invited to give a new estimate and the analysis that follows assesses these responses (plus the follow-up workshop and interviews) against the best estimates and the ranges.

8. Industry trade bodies told us that they believed dutyholders would struggle to estimate the transitional costs of individual areas of compliance (such as Internal Emergency Response Arrangements, Independent Verification etc.) and instead would only be able to estimate an overall cost. As a result, we asked industry to estimate overall transition costs – and also costs under individual areas of transition in case they were able. In fact, industry were able to provide costs for individual areas.

9. The costs in the original IA were estimated on a per-installation basis. In some cases, costs were found to differ between production and non-production installations (PIs and NPIs) and so different costs were used for PIs and NPIs in the IA.[5] Estimating average per-installation costs allows for extrapolation to total costs for the industry and this PIR has followed this method.

10. Responses to the PIR consultation on costs have been weighted according to the number of installations each respondent transitioned to SCR15 according to OSDR data. In some cases, this has meant excluding responses where the company did not identify themselves or there was no evidence that they had transitioned any installations – this affected only a small number of responses.

11. Respondents represented in total around 135 transitioned installations, around 42% of the total 320 that transitioned. Respondents comprised 104 PIs and 31 NPIs.

12. Cost estimates in this report are rounded to two significant figures.

2. Numbers of Installations and Companies Transitioning

13. The original IA estimated that 386 installations would transition from SCR15 to SCR05 based on installation numbers at the time and regulator expectations of industry change. Of these, 255 were estimated to be PIs and 131 NPIs.

14. Data from the OSDR shows that in fact only 320 installations transitioned, of which 221 were PIs and 99 were NPIs. It is evident that the estimate in the original IA was too high. The discrepancy may be due in part to a reduction in oil and gas production

[5] A production installation is an installation that extracts oil or gas from reserves beneath the seafloor; a non-production installation is any installation that does not extract oil or gas, such as a drilling rig or mobile accommodation unit ('floatel').

in the UK in recent years, leading to installations being decommissioned; as well as life-cycle cessation of production for older assets.[6]

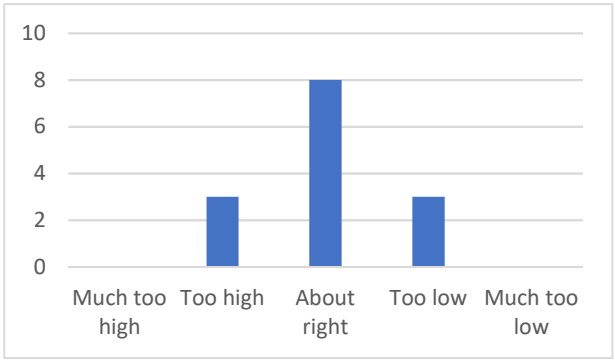
15. In addition, the IA estimated that 75 companies operating offshore would be required to create and submit a Corporate Major Accident Prevention Policy (see Section 5). OSDR data indicates that the actual number was 72.

3. Internal Emergency Response Arrangements

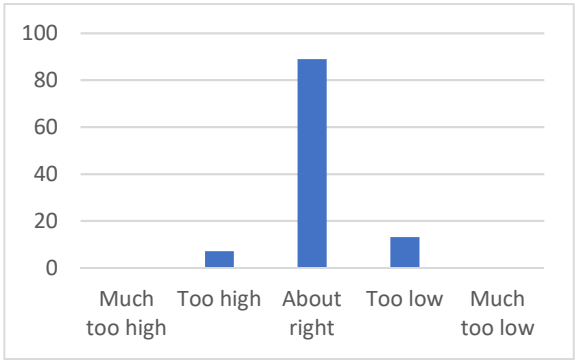
16. The Internal Emergency Response Arrangements (IERA) required changes to the following: additional requirements placed into Prevention of Fire and Explosion, and Emergency Response Regulations (PFEER), which forms the emergency response arrangements for SCR15 (including SECEs); a description of internal emergency response arrangements in the safety case; and an inventory for emergency response equipment.

17. The impact assessment estimated that the one-off cost to industry would be around £4.2k to £36k per installation, with a best estimate of around £20k per installation. The £20k best estimate consisted of: around £6.6k for additional information required under PFEER; around £5k for inventory of emergency response equipment; and around £8.3k for description of IERA in the safety case.

Figure 1: Consultation responses on IERA: "The IA estimate was…"



Consultation responses



Consultation responses weighted by installations

18. As shown in Figure 1, out of 27 respondents, 14 answered this question. Responses indicated that this estimate was about right.

19. Respondents who did not think the best estimate was about right were asked to provide a more reasonable figure instead; all five responses received were still within the range of £4.2 to £36k that the original impact assessment estimated.

20. Turning to the qualitative evidence that was collected by workshops and one-to-one interviews, respondents who answered that the estimate was too high commented that complying with the new the IERA requirements was a simple task of pooling relevant information together, so there were minimal changes needed. Attendees of

[6] https://oilandgasuk.co.uk/wp-content/uploads/2019/09/Economic-Report-2019-OGUK.pdf; and direct discussion with OGUK.

the workshop agreed that once the IERA was completed for one installation, there were economies of scale when the changes were applied to subsequent installations within an organisation's fleet.

21. A respondent who answered that the best estimate was too low explained that the IERA contained time-consuming documents to review and required the updating of all systems and supporting documents.

22. With consideration of all the evidence that has been gathered, the range of the IERA estimate being between around £4.2k to £36k per installation, with a best estimate of around £20k, is found to be about right.

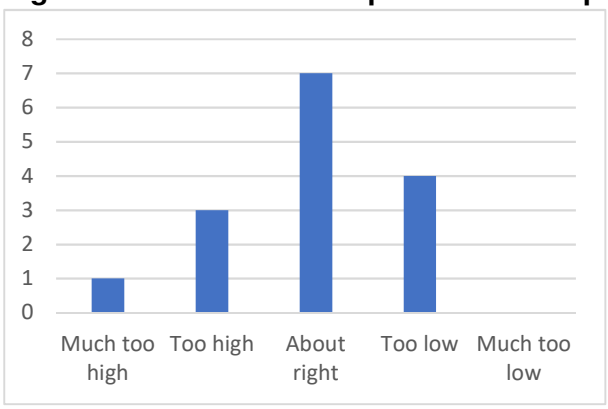
4. Independent verification

23. The main changes to verification schemes in SCR15 were:
    a. verification schemes expanded to include safety and environmentally critical elements (SECEs)[7];
    b. the independent verifier had to establish new criteria for SECEs in verification schemes;
    c. a description of the scheme had to be included in the safety case;
    d. and a simple statement had to be included in the safety case to confirm the independent verifier's comments have been considered and addressed.

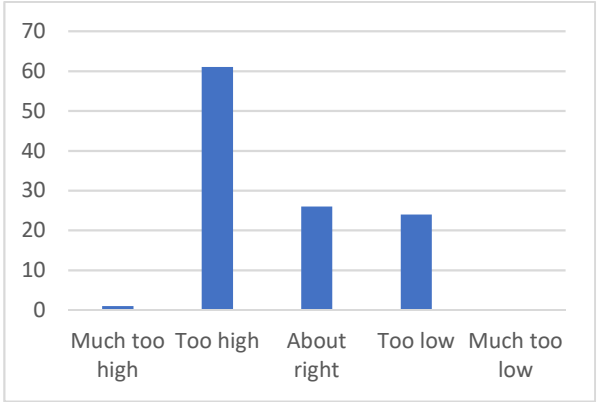
24. The impact assessment estimated the average one-off cost of complying with these new Independent Verification requirements in SCR15 would be in the region of £22k to £110k per installation, with a best estimate of around £68k per installation. This best estimate would break down into: around £35k for expanding verification schemes to include SECEs; around £30k for the independent verifier to establish new criteria for SECEs; and around £2.5k for the description of the extended verification scheme in the safety case.

[7] SECEs are pieces of equipment on installations that are critical to preventing or responding to an incident that threatens human safety or the environment. The previous requirement in SCR05 was only for equipment critical to the protection of human safety.

Figure 2: Consultation responses on Independent Verification: "The IA estimate was…"



Consultation responses



Consultation responses weighted by installations

25. As shown in Figure 2, 15 respondents answered this question. Without installation-weighting, independent verification costs appear about right, but weighting by installations shows the costs estimated in the IA were perhaps too high.

26. When asked in the consultation to re-estimate, there were six responses, all of which were within the range of £22k to £110k. Half of these were below the best estimate and half above, although one of the larger respondents by installation fleet made an estimate of £40k.

27. From the qualitative research, respondents felt that the estimate was too high because the verification process was not complex and that not many SECEs needed to be included as most had already been captured in the pre-existing scheme for human safety. One other respondent believed the estimate was too low due to the complexity of the work, although there would be economies of scale over numerous installations.

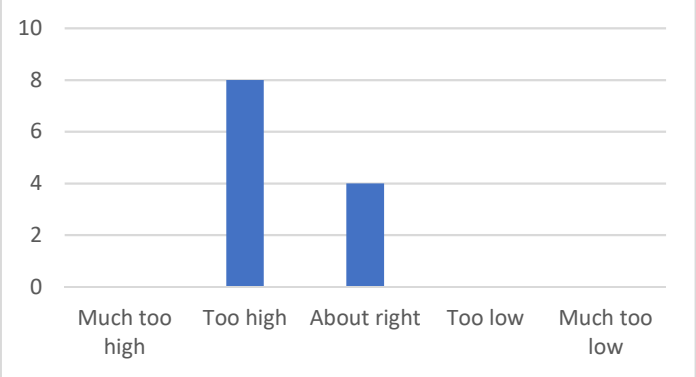
28. It is evident that there has been variability across costs experienced from industry. On the balance of the quantitative evidence and the compelling qualitative evidence, we conclude that the original IA estimate was probably too high and that an estimate in the lower portion of the original range would be more appropriate – between around £22k to £68k per installation, with a best estimate of around £45k.

5. Corporate Major Accident Prevention Policy

29. The Corporate Major Accident Prevention Policy (CMAPP) was a completely new requirement in SCR15. This is a written policy that should provide a high-level overview of how the management and control of major accident hazards is implemented throughout the organisation. It should demonstrate how strong informed leadership influences the safety and environmental culture at operational level and demonstrate senior management commitment to achieving a high standard of safety and environmental management.

30. The impact assessment estimated the average one-off cost for complying with this requirement would be around £52k to £100k with a best estimate of around £77k per company. This was based on a per-installation cost estimated by the IA research of between around £10k and £20k, with a best estimate of around £15k.

Figure 3: Consultation responses on CMAPP: "The IA estimate was…"



Consultation responses

31. As shown in Figure 3, out of 27 respondents, 12 answered this question and their responses conclude that the best estimate was too high. (There are no installation-weighted responses as this estimate was asked in the consultation per company, not per installation.)

32. There were seven re-estimates in the consultation responses between £20k to £35k; and a further estimate of £50k.

33. The qualitative analysis explained why many respondents thought this estimate was too high. CMAPP required no technical detail, therefore was not a complex process. This requirement involved decisions and agreement from senior management, and this was easier to attain than the original IA had estimated. An important point to note here is although there is indication that the original IA estimate was too high, there have been many issues with the CMAPP highlighted in the qualitative research relating to dutyholders reaching an agreement with HSE what on constitutes a compliant CMAPP. The associated costs with this iteration are captured in the costs recovered by OSDR (see Section 14).

34. There were no responses indicating that the estimate of £77k was too low, although there were concerns regarding the time taken to understand what was required to go inside the CMAPP. Even with these considerations in place, respondents felt that the IA estimate was still too high.

35. Based on the quantitative and qualitative evidence, including the fact that a third of respondents believed the IA estimate of £77k was about right, a range of around £20k to £77k per company, with a best estimate of around £49k, seems a more appropriate estimate.

36. As discussed in paragraph 15, 72 different CMAPPs were submitted as part of SCR15 transition and assessed in individual installations' safety cases. This gives a total cost across the 72 dutyholders of between around £1.4m and £5.6m, with a

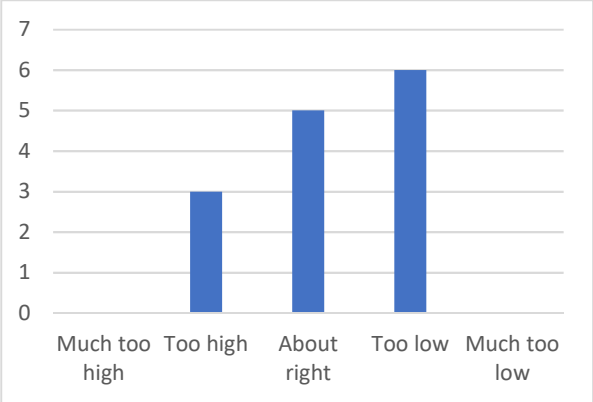
best estimate of around £3.5m. Divided by the 320 transitioning installations, this gives between around £4.5k and £17k per installation, with a best estimate of around £11k.

6. Safety and Environment Management System

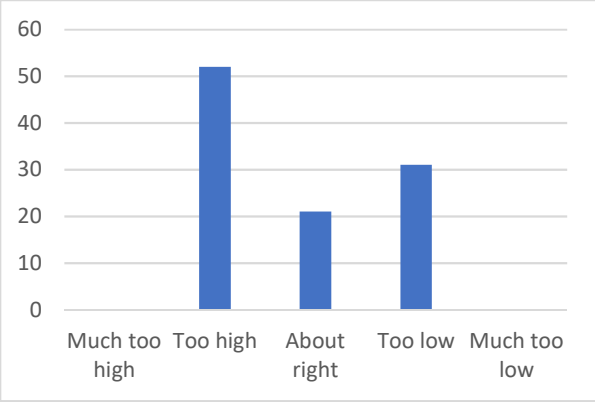
37. The new requirements for the Safety and Environment Management System (SEMS) required installations to have an integrated SEMS or describe how the two separate systems (one for safety and one for the environment) are integrated; and to produce a description of the SEMS in the safety case.

38. The IA estimated the average one-off cost of complying with new SEMS requirements in SCR15 to be in the region of £4.1k to £14k with a best estimate of £9.1k per installation. This best estimate comprised: around £5.9k for additional information required; and around £3.2k for the description of the SEMS included in the safety case.

Figure 4: Consultation responses on SEMS: "The IA estimate was…"



Consultation responses



Consultation responses weighted by installations

39. As shown in Figure 4, there were 14 respondents to this question and the consultation responses shows variability across weighted and unweighted consultation results. We decided to investigate responses further and found there was segmentation within the responses. Two larger organisations responded that the best estimate of £9.1k was too high; while the smaller organisations tended to think it was too low. However, another of the larger organisations also though the best estimates were too low.

40. Three re-estimates were offered by respondents between £20k to £30k (above the IA range); and another of £1.5k was given, which is below the IA range.

41. In the qualitative evidence, larger organisations highlighted they thought the IA-estimated cost was too high because they experienced synergies across installations – once the SEMS was completed for the first few installations these were duplicated across other installations. This drove the average cost per installation down.

42. Smaller organisations found the SEMS to be a large, complex document that required time and resource to produce.

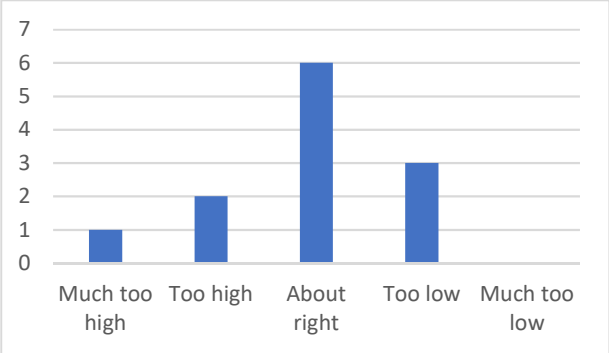
43. Overall, there has been great variability in the experience of SEMS across the industry. There seems to be some qualitative evidence to support a segmentation in costs for organisations by number of installations, but there is not a compelling quantitative case for how any such segmentation might be constituted. As such, this analysis reflects this variability, and we re-estimate the overall cost range to be between around £1.5k and £20k per installation, with a best estimate of around £11k.

7. Safety Case for a Production Installation

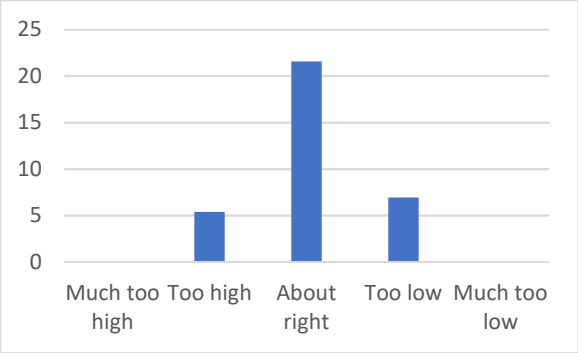
44. Some new information was required in the SCR15 safety case schedules and the whole safety case had to be reviewed before submitting it. This is in addition to the requirements related to the IERA, Independent Verification, CMAPP and SEMS, which are captured above.

45. In the original IA, the cost of this differed between PIs and NPIs (for NPIs, see next section). The IA estimated the one-off cost per production installation would be around £15k to £45k with a best estimate of around £30k.

Figure 5: Consultation responses on production installation safety case: "The IA estimate was…"



Consultation responses



Consultation responses weighted by installations

46. As shown in Figure 5, the 12 consultation responses seem to agree that the best estimate of £30k per production installation was about right.

47. One of the largest respondents to the consultation initially said that the best estimate was too low, which significantly skewed the overall distribution in that direction. However, in a follow-up interview, it became clear that they had counted activities in their cost assessment that did not relate to SCR15 compliance and so we have excluded them from the analysis of this question.

48. There were two re-estimates given by consultation respondents: £20k (within the IA range) and £80k (out of range).

49. The qualitative analysis explains that in some cases, the IA estimate was too high, such as a gas-producer enjoying a simpler process of writing the safety case than

oil-producers due to having fewer environmental risks; and work being produced in-house, rather than through a consultant, which drove costs down.

50. The workshop attendees initially thought that this cost was too low. There was confusion amongst the group regarding what the estimate referred to; we reminded them that the activity involved in this cost estimate was including additional environmental information in the schedules, pulling the Safety Case together and reviewing it. Respondents than agreed that £30k was about right.

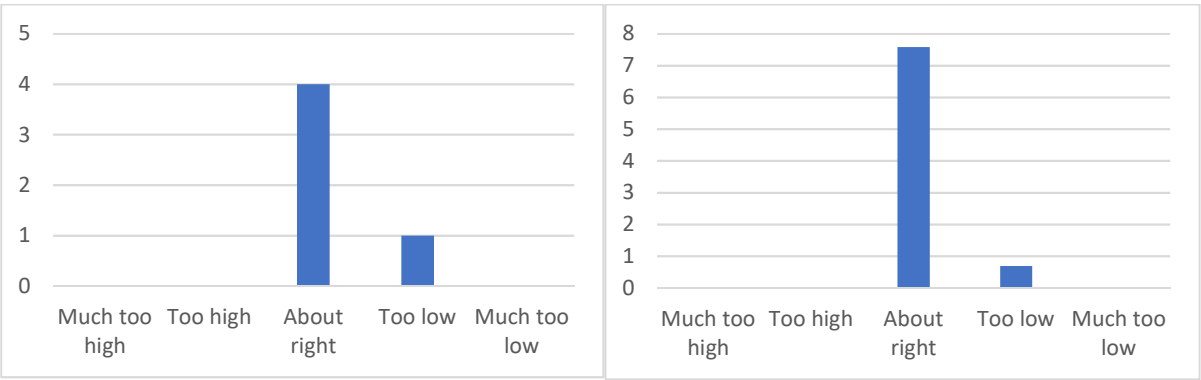
51. To conclude, there is enough evidence to support the IA range of between around £15k and £45k per PI, with a best estimate of around £30k, is about right.

8. Safety Case for a Non-Production Installation

52. As described in paragraph 44 for PIs, NPIs also needed to add information to their safety case and review it prior to submission.

53. The IA estimated the one-off cost to industry to be between around £5k to £15k per installation, with a best estimate of around £10k per non-production installation.

Figure 6: Consultation responses on non-production installation safety case: "The IA estimate was…"



Consultation responses

Consultation responses weighted by installations

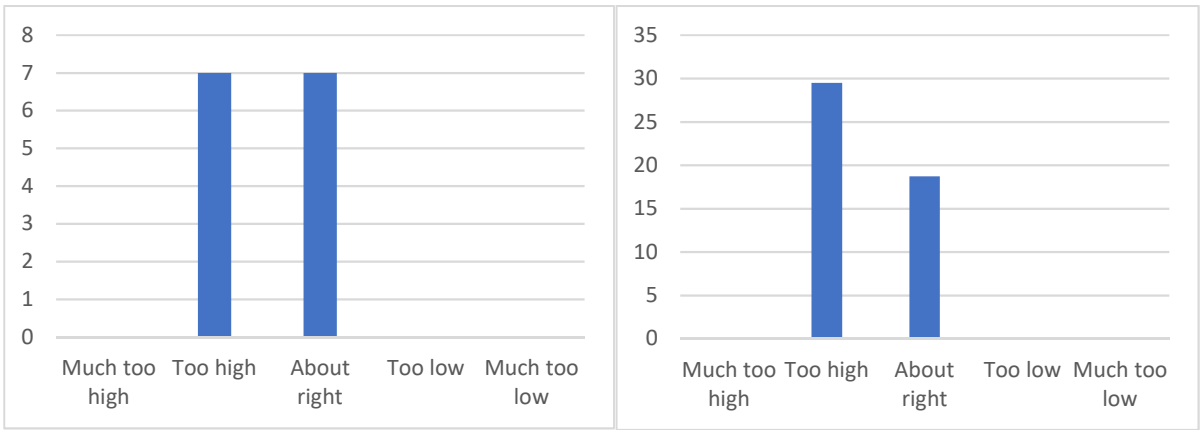
54. As shown in Figure 6, only five respondents answered this question due to a small number owning NPIs. The consultation results concluded that this estimate was about right, and we have not uncovered any further qualitative evidence to contradict this.

9. Promoting change to staff

55. The industry research group for the original IA reported that they would need to promote the changes in SCR15 to their workers by making visits to installations, preparing and distributing information, holding workshops and town-hall style meetings, updating websites and training. Several companies reported they already had ongoing training programmes to maintain awareness of regulations and these extra activities would be necessary during the transition to SCR15.

56. The impact assessment estimated that the average one-off cost would be in the region of £20k to £50k, with a best estimate of £35k per installation, to 'promote' SCR15 to staff.

Figure 7: Consultation responses on promoting change to staff: "The IA estimate was…"



Consultation responses

Consultation responses weighted by installations

57. As shown in Figure 7, 14 respondents answered this question. They indicated that the original best estimate was either about right or too high.

58. In one instance, a respondent to the consultation originally estimated the IA best estimate to be too low, but in a follow-up conversation reported that they had estimated it to be £28k (i.e. lower than the IA best estimate) and their consultation response has been adjusted accordingly in Figure 7.

59. A further estimate offered in a follow-up interview by one of the largest respondents was about £2k per installation.

60. From the qualitative evidence gathered, industry thought the estimate was too high in some cases because staff were kept involved throughout the transition and so learned of the changes as they went along. Two organisations who had larger numbers of normally unmanned installations (NUIs), reported minimal efforts to inform staff of the changes.

61. To conclude, the £35k best estimate is probably too high on average. There is little quantitative evidence to support a re-estimation, but given the evidence available and the significant support for the £35k estimate being about right, we estimate that a range of between around £10k and £35k, with a best estimate of around £23k, might be reasonable.

10. Well notifications

62. Well operators were required to add the CMAPP and SEMS to the first well notification that they submitted to the CA under SCR15. The cost of this was not estimated in the original IA.

63. Responses to the consultation indicated that this probably took just a few hours per notification and so we conclude that the costs are minimal.

11. Gold-Plating

64. In transposing Directive requirements into SCR15, HSE retained two areas of pre-existing higher standards – the definition of a major accident to keep diving operations of fewer than five people in scope; and the definition of an installation to include connected supplementary units.[8]

65. This gold-plating represented the high risks associated with offshore diving operations; and the risks of a major accident that can be posed by an installation's supplementary units placed more than 500 metres from the installation. SCR15 maintained the approach of SCR05 that these should be considered alongside other major hazard risks in the Safety Case.

66. All of these were pre-existing requirements and so were assessed in the IA as imposing no additional costs to dutyholders. As part of the PIR research process, we have not been presented with any evidence to overturn that conclusion.

67. Offshore diving remains a high-risk activity. Keeping diving operations of fewer than five people in the Safety Case provides a clear and unambiguous instruction to the dutyholder regarding management of hazardous diving operations. Removal of this inclusion of diving would potentially increase confusion, proliferate misunderstandings and reduce HSE influence in an area with a large number of significant incidents and near-misses even since the introduction of SCR15.

68. No supplementary units in scope of the gold plating have been built, but their major hazard potential remains and SCR15 is essentially future-proofed should such units be built.

12. Other changes assessed in the original IA

69. In addition to the one-off costs discussed above, the original IA assessed a number of requirements of SCR15 that were estimated to have no impact or only an ongoing impact (rather than a one-off impact, which this PIR examines – see paragraph 3).

70. We asked an open question in our consultation, workshops and interviews as to whether respondents had incurred any transitional costs other than the ones discussed above to capture any significant impacts in these other areas and none were found. Annex 2 explains this for each area of change assessed in the original IA.

[8] The original IA also discussed a third area of HSE gold-plating relating to enter and departure notifications for NPIs. This gold-plating was applied to Offshore Installations and Pipeline Works (Management and Administration) Regulations 1995 and not SCR15, so it not evaluated in this PIR.

13. Total transitional costs

13.1. Per-Installation transition costs

71. The original IA estimated that the transitional costs for a PI were between around £76k and £280k, with a best estimate of around £180k.

72. For an NPI, the IA estimated a transitional cost of between around £66k and £250k for an NPI, with a best estimate of around £160k. The analysis above now gives us an opportunity to re-estimate these figures.

73. As summarised in Table 1, the PIR analysis indicates that the IA overestimated the per-installation costs. This PIR estimates that the one-off cost for a PI was between around £57k and £220k, with a best estimate of around £140k; and for an NPI was between around £47k and £190k, with a best estimate of around £120k.

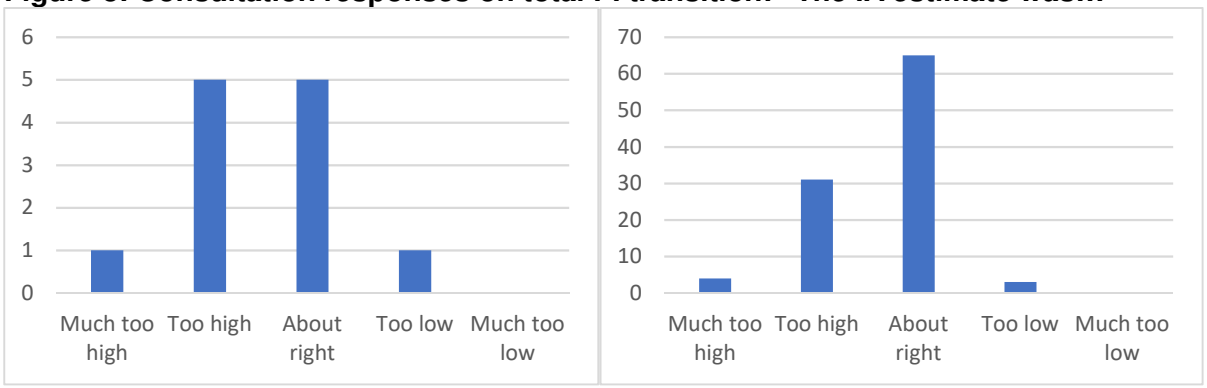
Table 1: Summary of SCR15 transition costs per installation (£k)

SCR15 Requirement	IA estimate			PIR conclusion –	PIR re-estimate		
	Low	Best	High	IA estimate is…	Low	Best	High
IERA	£4.2	£20	£36	About right	£4.2	£20	£36
Independent Verification	£22	£68	£110	Too high	£22	£45	£68
CMAPP	£10	£15	£20	Too high	£4.5	£11	£17
SEMS	£4.1	£9.1	£14	Too narrow	£1.5	£11	£20
Safety Case							
PI	*£15*	*£30*	*£45*	*About right*	*£15*	*£30*	*£45*
NPI	*£5*	*£10*	*£15*	*About right*	*£5*	*£10*	*£15*
Promoting change	£20	£35	£50	Too high	£10	£23	£35
First well notification		N/A		N/A		Minimal	
Gold-plating		Nil		Right		Nil	
Total per installation							
PI	**£76**	**£180**	**£280**	**Too high**	**£57**	**£140**	**£220**
NPI	**£66**	**£160**	**£250**	**Too high**	**£47**	**£120**	**£190**

Note: totals may appear not to sum due to rounding

74. As discussed in paragraph 8, as well as asking industry in the consultation about the costs of each area of transition, we also asked them about total costs in case they could not break the overall costs down. However, as industry was able to provide a reasonable cost breakdown, we can also use the responses on total costs to triangulate the results above.

Figure 8: Consultation responses on total PI transition: "The IA estimate was…"



Consultation responses

Consultation responses weighted by installations

75. As shown in Figure 8, there were 12 responses on the question of total PI transition costs (in addition to the responses on the breakdown of those costs, discussed in the previous sections). The installation-weighted responses indicate that the estimate in the IA was broadly about right, but perhaps too high for some, and this agrees broadly with the conclusion of the PIR thus far.

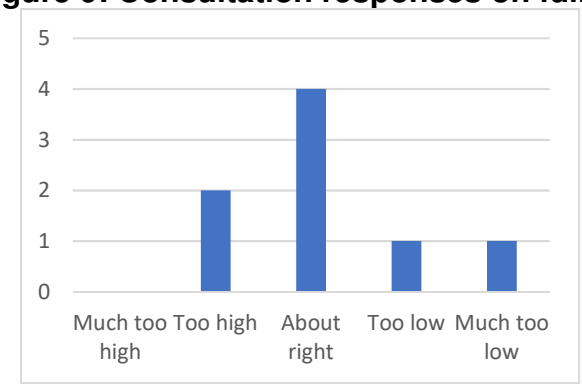
76. Consultation respondents offered five re-estimates between £80k to £100k (within the IA range); two at £175k and £250k (within the IA range); and one at 300k (above the IA range).

77. The qualitative evidence reported the IA best estimate could be too high because work was done by a small in-house team, rather than consultants. Evidence also highlighted that some components only required the collation of existing information within the organisation and therefore was not an onerous task.

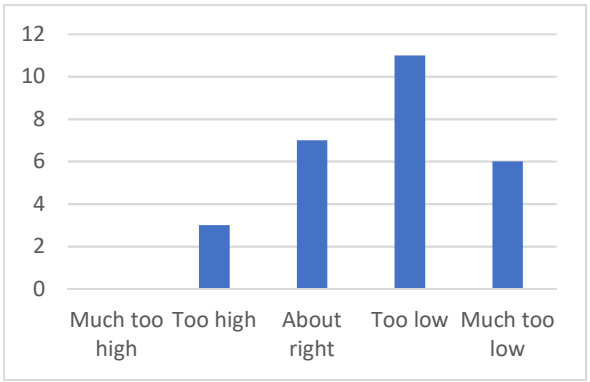
78. On the other hand, other evidence suggests the best estimate was too low in some cases as there were legal costs involved in making sure the work was in sync with the regulations; and difficulty working out what was required before the official guidance was published. Dutyholders also spent time agreeing submissions with inspectors. Additionally, all supporting documents as well as the main document required an update.

79. Generally, the responses on full transition for PIs support the conclusions of PI costs summarised in Table 1.

Figure 9: Consultation responses on full NPI transition: "The IA estimate was…"



Consultation responses



Consultation responses weighted by installations

80. Turning to NPIs, *Figure 9* shows that eight respondents answered this question and responses were varied. One of the larger respondents (an industry association) that thought the IA estimate was 'too low' and suggested that £141k would be a better estimate, which is still fairly central in the IA range. There were two other re-estimates offered in the consultation: £100k (within range) and £250k (top of range).

81. A further estimate made by another industry association separate from the consultation came to around £60k per NPI.

82. Given the variability in the answers on total NPI transition costs, the evidence does not provide a compelling case to overturn the total cost suggested by the aggregation of NPI cost components in Table 1; and the fact that the new NPI range in Table 1 encompasses the estimates made by the two industry associations provides some positive triangulation.

13.2. Aggregate transition costs

83. As described in paragraph 13, the original IA estimated that 386 installations would transition from SCR05 to SCR15 in the three years from July 2015 to July 2018. Of these, 255 would be PIs and 131 NPIs.

84. Based on the per-installation costs estimated in the IA discussed in paragraph 71, this gives a total one-off transitional cost for SCR15 of:

    a. For PIs, between around £19m and £71m, with a best estimate of around £45m
    b. For NPIs, between around £8.6m and £32m, with a best estimate of around £21m
    c. In total, between around £28m and just over £100m, with a best estimate of around £66m

85. OSDR data indicates that in reality 320 installations transitioned, of which 221 were PIs and 99 NPIs. Based on the per-installation costs re-estimated in this PIR discussed in paragraph 73, this gives a total one-off transitional cost for SCR15 of:

a. For PIs, between around £13m and £49m, with a best estimate of around £31m
b. For NPIs, between around £4.7m and £19m, with a best estimate of around £12m
c. In total, between around £17m and £68m, with a best estimate of around £43m

86. This indicates that the IA overestimated the one-off transition costs of compliance by between around £10m and £36m, with a best estimate of around £23m.

87. This overestimate is due to two causes: the overestimation of the numbers of installations that would be transitioning in the original IA (discussed in paragraph 14); and the over estimation of some per-installation costs (discussed throughout this report).

14. Costs recovered by OSDR

88. In addition to the compliance costs discussed above, the original IA also estimated that each installation would be charged by OSDR for assessments relating to submissions for SCR15 transition. Assessments were carried out by a combination of HSE and BEIS reviewers; and estimates in the IA were made by the team setting up OSDR at the time.

89. The average amount to be recovered estimated per installation in the IA was between around £8.4k and £10k, with a best estimate of around £9.4k. Around 80% of this cost was charged by HSE assessors and around 20% by BEIS assessors.

90. Based on 386 transitioning installations as estimated in the original IA, as discussed in paragraph 15, this sums to between around £3.3m and £4.0m, with a best estimate of around 3.6m. This is summarised in Table 2.

Table 2: Estimated costs recovered by OSDR in the original IA (£ks)

	Low	Best Estimate	High
Costs recovered per installation			
IERA	£2.8	£3.1	£3.4
Independent Verification	£0.9	£1.0	£1.1
CMAPP[1]	£0.3	£0.3	£0.3
SEMS	£2.7	£3.0	£3.3
Safety Case[2]	£1.7	£1.9	£2.1
Total (per installation)	**£8.4**	**£9.4**	**£10**
Total (aggregate)	**£3,300**	**£3,600**	**£4,000**

Note: totals may appear not to sum due to rounding

[1] The CMAPP per-installation cost is based on a per-submission cost of between around £1.3k and £1.6k, with a best estimate of around £1.4k. Multiplied by an IA-estimated 75 submissions by companies and then divided by 386 installations gives the per-installation cost.

[2] Safety case review costs were not estimated to differ between PIs and NPIs in the IA.

91. Actual average costs recovered have been estimated using OSDR data. It is worth noting that OSDR data is recorded for the purposes of invoicing dutyholders, rather

than for assessing the costs of SCR15 transition. As such, the cost data contains some assessment costs where we have had to disentangle charges for assessment work from other administrative issues and to account for multiple installations that may have been recorded under one safety case. Nevertheless, the average amount recovered was found to be around £8.1k per installation, but some submission reviews ranged in cost as high as several tens of £ks for the most expensive cases.

92. The balance of costs between HSE and BEIS assessors was found to differ from that estimated in the IA. HSE assessment costs per installation were slightly lower than anticipated and BEIS assessment costs slightly higher, although the total was slightly lower overall. In the actual OSDR data, HSE assessors accounted for around two thirds of costs and BEIS for around one third. OSDR assessment times were subject to a learning curve as inspectors and dutyholders became familiar with safety case submissions and what was required of them.

93. Based on 320 transitioning installations transitioning, this comes to around £2.6m cost-recovered for transitional assessments.

94. This indicates that the total amount cost-recovered by OSDR was between around £0.7m and £1.4m lower than the IA estimated, with a best estimate of around £1.0m.

15. Emerging Ongoing Costs

95. While the research for this PIR has focused on the one-off transitional costs, we have also asked industry about any concerns they have about emerging ongoing costs to guide analysis in the next PIR. Respondents raised a number of issues during the qualitative research, many of which related to the operation of OSDR or other operational issues rather than SCR15 itself.

96. At the workshops, cyber security was identified as the most significant emerging issue. In future, it is likely that the Safety Case will need to demonstrate that cyber security threat has been considered in the assessment of major accident hazards and that measures have been put in place to control them. HSE has developed operational guidance on Cyber Security for Industrial Control Systems and are also currently developing an Offshore Inspection Guide on Cyber Security.

97. Another was the cost of ongoing maintenance and updating of the systems and documents updated by SCR15 – these were assessed in the original IA and will be evaluated in the next PIR. Some respondents reported that they anticipated ongoing costs to maintain systems and documents, or to bring new installations into compliance, might be lower now that the transitional cases had been accepted and dutyholders had a better idea of what they were expected to demonstrate.

Annex 1: Cost areas of IA evaluated in this PIR

The original IA for the transposition of the Offshore Safety Directive is available on legislation.gov. A further breakdown of the impacts assessed in this PIR are given in Annex 2.

Section of IA	Area of cost	Evaluated in this PIR?	Reasons
9.1	Setting up the OSDR	**No**	Setting up the Offshore Competent Authority is not a requirement of SCR15
9.2	Operating the OSDR	**No**	Running the Offshore Competent Authority is not a requirement of SCR15
9.3	OSDR assessments related to HSE legislation to implement the Directive	**Yes**	Costs incurred as part of the transposition of SCR15 **with the exception of**: • 9.3.2 Internal Waters, which will be assessed in the SCR05 PIR • 9.3.15 Implementing Act, which is direct-acting EU regulation • 9.3.16 EUOAG, which is not a SCR15 requirement
9.4	OSDR assessments related to DECC Environmental Legislation to implement the Directive	**No**	BEIS legislation will not be evaluated by HSE
9.5	OSDR and Licensing Authority assessments related to changes to DECC licensing legislation to implement the Directive	**No**	BEIS legislation will not be evaluated by HSE
9.6	Complying with changes to HSE legislation to implement the Directive	**Yes**	SCR15 requirements **with the exception of**: • 9.6.2 Internal Waters, which will be assessed in the SCR05 PIR • 9.6.18 Implementing Act, which is a direct-acting EU regulation
9.7	Maintaining existing standards and gold-plating of HSE legislation	**Yes**	SCR15 requirements **with the exception of:** • 9.7.3 Enter or Leave Notifications for NPIs, which refers to the Offshore Installations and Pipeline Works (Management and Administration) Regulations 1995
9.8	Complying with changes to DECC environmental legislation to implement the Directive	**No**	BEIS legislation will not be evaluated by HSE
9.9	Complying with changes to DECC licensing legislation to implement the Directive	**No**	BEIS legislation will not be evaluated by HSE
9.10	Maintaining existing standards of DECC legislation	**No**	BEIS legislation will not be evaluated by HSE
9.11	Complying with legislation to implement Article 38	**No**	Defra legislation will not be evaluated by HSE
9.12	Complying with changes to update additional HSE legislation	**No**	Not SCR15 requirements
9.13	Benefits	**Yes**	These have been assessed qualitatively in the Evidence Review of this PIR, **with the exception of:** • 9.13.2 Increased oversight of the CA, as this PIR is not assessing the CA • 9.13.5 Underground Coal Gasification and Onshore Combustible Gas Storage and Recovery, which do not relate to SCR15 requirements.

Annex 2: Individual changes in the original IA evaluated in this PIR

Impacts in the original IA were assessed to be one-off, ongoing or to have zero/ negligible impact. Those impacts are either evaluated in this PIR (marked 'Y') or are not evaluated in this PIR (marked 'N'). Those marked N/A either had no such cost estimated in the IA (i.e. one-off, ongoing or zero/ negligible); or did not relate to SCR15.

Section of IA	Change description in IA	Assessed in this PIR?			Comments
		One-off impact	Ongoing impact	Zero/ negligible impact	
IA Section 9.3: Costs for CA assessments related to HSE Legislation to implement the Directive					
9.3.1	Offshore Gas Storage and Recovery	N/A	N/A	Y	No evidence found to overturn original assessment of no cost
9.3.2	Internal Waters	N/A	N/A	N/A	This relates to the SCR05 Regulations and will be assessed in the SCR05 PIR
9.3.3	Internal Emergency Response Plans[9]	Y	N	N/A	The one-off costs of OSDR reviews are discussed in Section 14 of this PIR analysis. Ongoing costs will be assessed in the next SCR15 PIR
9.3.4	Independent Verification	Y	N	N/A	The one-off costs of OSDR reviews are discussed in Section 14 of this PIR analysis. Ongoing costs will be assessed in the next SCR15 PIR
9.3.5	Corporate Major Accident Prevention Policy	Y	N	N/A	The one-off costs of OSDR reviews are discussed in Section 14 of this PIR analysis. Ongoing costs will be assessed in the next SCR15 PIR

[9] Note that terminology has since changed such that these are now referred to as *Arrangements*, rather than *Plans*.

Section of IA	Change description in IA	Assessed in this PIR?			Comments
		One-off impact	Ongoing impact	Zero/ negligible impact	
9.3.6	Safety and Environmental Management System	Y	N	N/A	The one-off costs of OSDR reviews are discussed in Section 14 of this PIR analysis. Ongoing costs will be assessed in the next SCR15 PIR
9.3.7	Safety Cases	Y	N	N/A	The one-off costs of OSDR reviews are discussed in Section 14 of this PIR analysis. Ongoing costs will be assessed in the next SCR15 PIR
9.3.8	Design and Relocation Notifications	N/A	N	N/A	Ongoing costs will be assessed in the next SCR15 PIR
9.3.9	Well Notifications	N/A	N	N/A	The one-off costs of first well notifications were not assessed in the original IA. Ongoing costs will be assessed in the next SCR15 PIR
9.3.10	Combined Operations Notifications	N/A	N/A	Y	No evidence found to overturn original assessment of no cost
9.3.11	Dismantling a Fixed Production Installation	N/A	N	N/A	Ongoing costs will be assessed in the next SCR15 PIR
9.3.12	Reporting Imminent Danger or Increased Risks of a Major Incident	N/A	N/A	Y	No evidence found to overturn original assessment of no cost

Section of IA	Change description in IA	Assessed in this PIR?			Comments
		One-off impact	Ongoing impact	Zero/ negligible impact	
9.3.13	Reporting Major Accidents Outside the EU	N/A	N	N/A	Ongoing costs will be assessed in the next SCR15 PIR
9.3.14	Safety Zones	N/A	N/A	Y	No evidence found to overturn original assessment of no cost
9.3.15	Implementing Act on Data Reporting Criteria and Format	N/A	N/A	N/A	This is a direct-acting EU regulation and does not form part of this PIR
9.3.16	Offshore Oil and Gas Authorities Group	N/A	N/A	N/A	This is not an SCR15 requirement and does not form part of this PIR
IA Section 9.6 Costs to industry for complying with changes to HSE legislation to implement the Directive					
9.6.1	Offshore Gas Storage and Recovery	N/A	N/A	Y	No evidence found to overturn original assessment of no cost
9.6.2	Internal Waters	N/A	N/A	N/A	This relates to the SCR05 Regulations and will be assessed in the SCR05 PIR
9.6.3	Internal Emergency Response Plans[9]	Y	N	N/A	One-off costs to industry assessed in Section 3 of this PIR analysis. Ongoing costs will be assessed in the next SCR15 PIR.
9.6.4	Independent Verification	Y	N	N/A	One-off costs to industry assessed in Section 4 of this PIR analysis. Ongoing costs will be assessed in the next SCR15 PI

Section of IA	Change description in IA	Assessed in this PIR?			Comments
		One-off impact	Ongoing impact	Zero/ negligible impact	
9.6.5	Corporate Major Accident Prevention Policy	Y	N	N/A	One-off costs to industry assessed in Section 5 of this PIR analysis. Ongoing costs will be assessed in the next SCR15 PIR
9.6.6	Safety and Environmental Management System	Y	N	N/A	One-off costs to industry assessed in Section 6 of this PIR analysis. Ongoing costs will be assessed in the next SCR15 PIR
9.6.7	Safety Case	Y	N	N/A	One-off costs to industry assessed in Sections 7 and 8 of this PIR analysis. Ongoing costs will be assessed in the next SCR15 PIR
9.6.8	Design and Relocation Notifications	N/A	N	N/A	Ongoing costs will be assessed in the next SCR15 PIR
9.6.9	Well Notifications	Y	N	N/A	The one-off costs to industry of first well notifications were not assessed in the original IA, but the actual one-off costs to industry of those first notifications are discussed in Section 10 of this PIR analysis. Ongoing costs will be assessed in the next SCR15 PIR

Section of IA	Change description in IA	Assessed in this PIR?			Comments
		One-off impact	Ongoing impact	Zero/ negligible impact	
9.6.10	Combined Operations Notifications	N/A	N	N/A	Ongoing costs will be assessed in the next SCR15 PIR
9.6.11	Dismantling of a fixed Production Installation	N/A	N/A	Y	No evidence found to overturn original assessment of negligible cost
9.6.12	Reporting Imminent Danger or Increased Risk of a Major Accident	N/A	N/A	Y	No evidence found to overturn original assessment of no cost
9.6.13	Reporting Major Accidents Outside the EU	N/A	N/A	Y	No evidence found to overturn original assessment of no cost
9.6.14	Safety Zones	N/A	N/A	Y	No evidence found to overturn original assessment of no cost
9.6.15	Collecting and Recording Data	N/A	N/A	Y	No evidence found to overturn original assessment of no cost
9.6.16	Enter and Leave Notifications	N/A	N/A	Y	No evidence found to overturn original assessment of no cost
9.6.17	Promoting Change to Staff	Y	N/A	N/A	One-off costs to industry assessed in Section 9 of this PIR analysis
9.6.18	Implementing Act on Data Reporting Criteria and Format	N/A	N/A	N/A	This is a direct-acting EU regulation and does not form part of this PIR
9.6.19	Preparing and Revising Standards and Good Practice	N/A	N/A	Y	No evidence found to overturn original assessment of no cost

Section of IA	Change description in IA	Assessed in this PIR?			Comments
		One-off impact	Ongoing impact	Zero/ negligible impact	
9.6.20	Transport of Inspectors Offshore	N/A	N/A	Y	No evidence found to overturn original assessment of no cost
IA Section 9.7: Costs of Maintaining Existing Standards and Gold Plating of HSE Legislation					
9.7.1	Definition of Major Accident	N/A	N/A	Y	No evidence found to overturn original assessment of no cost – see Section 11 of this PIR analysis
9.7.2	Supplementary Units Connected to an Offshore Installation	N/A	N/A	Y	No evidence found to overturn original assessment of no cost – see Section 11 of this PIR analysis
9.7.3	Enter or Leave Notifications for a Non-Production Installation	N/A	N/A	N/A	This does not relate to SCR15 requirements and so is not evaluated in this PIR
IA Section 9.13: Benefits					
9.13.1[10]	Major Accidents Relating to Offshore Oil and Gas Operations	N/A	Y	N/A	This is evaluated qualitatively in Part One of the Evidence Review of this PIR
9.13.2	Increased oversight of the CA	N/A	N/A	N/A	The operation of the CA is out of the scope of this PIR
9.13.3	Single point of contact	N/A	N	N/A	Quantifiable ongoing impacts will be assessed in the next SCR15 PIR
9.13.4	Joint inspection visits	N/A	N	N/A	Quantifiable ongoing impacts will be assessed in the next SCR15 PIR

[10] Note that headings in the original IA are mislabelled 9.**12**.1, 9.**12**.2 and so on.

Section of IA	Change description in IA	Assessed in this PIR?			Comments
		One-off impact	Ongoing impact	Zero/ negligible impact	
9.13.5	Underground Coal Gasification & Onshore Combustible Gas Storage and Recovery	N/A	N/A	N/A	This does not relate to SCR15 requirements and so is not evaluated in this PIR