

COST BENEFIT ANALYSIS FOR A CHANGE TO THE RHI Periodic data scheme – Version 1
9th July 2013

COST BENEFIT ANALYSIS – RHI Periodic Data Process Improvement Programme : A long term solution	
<p>Scheme: RHI</p> <p>Internal/External departments impacted: IT and DECC</p> <p>Type of measure: IT Register changes, Integration of CRM and Register systems and integration with Accreditation process flow</p>	<p>Author: Mairead O’Hanlon</p> <p>Contact: Personal information redacted by the RHI Inquiry</p> <p>Department: NSD/RHI</p>
<p>Brief:</p> <p>The RHI scheme provides a tariff payment to generators of heat from renewable technologies at all scales. Ofgem draws down funds from a government bank account in order to make payments. Funds required will be determined by forecasting and scheme uptake figures from DECC. Ofgem is working to administer this scheme effectively and efficiently. Administration of the scheme includes accreditations and amendments; registration and auditing of generators, call handling/ helpline service; Periodic Data Submissions (PDS) assessment and payments.</p> <p>PDS are submitted by participants via the RHI register to ensure that the correct payments are made to the participant; this only reflects the heat output that is eligible for payment. Currently there are 33% of errors with the Periodic data submissions received, requiring manual workarounds due to incorrect Heat Output Data (HOD) being provided by the participant and the inefficiency of the system. The HOD is submitted quarterly by participants via the register with an installed capacity below 1MW and monthly by participants with an installed capacity of 1MW or above, however fuel data for these plants are calculated quarterly. This process is causing a number of manual workarounds due the system design. In order to pay participants the data is verified by the Periodic Data team internally.</p> <p>Due to the external budgetary cuts made during the development of the RHI database a number of Periodic data processing activities were removed from the original scope. This has led to a number of manual spreadsheet and workaround being put in place. This is increasing the exposure to potential fraud, human error and a high risk of data been lost as stand alone spreadsheets will have to be maintained and managed over a 20year period. A total of 8 manual spreadsheets have been developed and implemented to record and check submissions due to the descope IT work.</p> <p>Ofgem’s administration of the Amendments and PDS processes including estimated data cases has the opportunity to become more efficient and deliver consistency and clarity for the Participants and ensure the correct data is being provided to reduce errors with their submissions. This has led to the Periodic Data Submissions (PDS) Process Improvement Project (PIP) being mobilised, to complete a detailed investigation of the end to end of the Amendments and PDS systems and processes from submission through to the DA approval.</p> <p>This review has concluded that the IT system implemented (the register) does not have the functionality required to meet the operational needs of the Amendments and the PDS teams. This cost benefit paper provides recommendations for both the system and processes changes to reduce the time spent on managing errors in data due to incorrect information provided by the Participant. The project looked at the integration of all spreadsheets into a single systems, such as LAMB, RAM and Data Assignment; Automating the HOD calculation for the Participant; Integrating the Register and CRM to align to the Accreditation process; improve searching and assigning of the submissions; Guidance documents improvements to ensure RFT; Improved metering functionality for amendments; Embedding estimated data cases processes; and implementing DA batch approval. These changes will ensure that requirements meet the needs of the business and mitigate the need to increase the operational head count.</p> <p>This review has identified over 69 recommendations for both system (Register and CRM) and processes changes. These cover changes for the External user to ensure RFT; Accreditation team for amendments and metering; and Periodic data team. All recommendations have been built into the cost benefit analysis paper and will be tested during the time motion study. The volume data used for the cost benefit calculations are based on DECC 5 year Accreditation forecast.</p> <p>This paper has 4 options</p> <ol style="list-style-type: none"> 1. <u>Do Nothing</u> – RHI Scheme cannot cope with applications numbers forecast by DECC. 2. <u>Manual solution</u> - There are no IT cost associated with the manual solution but the RHI Operations team would have to increase numbers to cope with the data issues from the applications at a cost of £3,218K This rises to 3 Band D staff and 33 Band B staff in 2018 3. <u>IT end to end solution</u> – This will deliver net benefits of £2,775K over 5 years. However, the cost of delivery will be £373,290 including £90,109 contingency and will have a negative impact on Accreditations team. 4. <u>Integrated CRM and in-house IT solution</u> – This will deliver net benefits of £3,004K. However, the cost of delivery £219,117, including contingency of £39,230. 	

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Option 4 is recommended – Implementation of an integrated in-house IT and CRM solution. This will deliver a net benefit of £3,004K for FTE quantifiable benefits. This benefit is based on IT and CRM cost of £213K including contingency. It is recommended that the IT costs are allocated from the 2013/14 budget as any delay with implementation will have an impact on Operational headcount cost.

IT has provided cost for both options included in the cost benefit paper and IT is in support of the recommended option.

The cost difference of option 4 over option 3 is £159K for delivery cost and £69K impact on the Accreditation team having to go from 1 to 2 systems.

For Option 4 the break-even point for this option when considering the avoided staff costs as a benefit compared to the IT costs is w/c: 02-Mar-2015, with an NPV of £2,420K. For option 3 the break-even point for this option when considering the avoided staff costs as a benefit compared to the IT costs is w/c: 17-Aug-2015, with an NPV of £2,240K.

The Implementation board requested a cost/benefit analysis of the options for the recommendation to make the RHI amendments and periodic data process more efficient and provide clarity and consistency to the Participant to ensure Right First Time. This paper is based on the FTE and the cost of IT/Cantata to implement the recommendations.

Supporting data can be found in the attached



PDS
Recommendations Lo

Financial impact of options: cost and benefits over 5 years

The below table identify financial and FTE impact on each of the options based on FTE quantifiable benefits.

Impact	Option 1 No Scaling	Option 2 Manual solution	Option 3 IT solution	Option 4 Integration of CRM and IT solution
Impact Current financial year (2012/13)				
Costs (IT cost)	£0	£0	£283,181	£180,195
Costs (Non IT)	£0	£21,275	£2,550	£0
Contingency	£0	£0	£90,108	£33,235
Total cost	£0	£21,275	£375,839	£213,430
Benefits (FTE quantifiable)	£0	£0	£21,275	£21,275
Total	£0	£0	£354,564	£192,155
Future years 5 yr plan				
Costs (IT cost)	£0	£0	£0	£0
Costs (Non IT)	£0	£3,217,869	£69,488	£0
Benefits (FTE quantifiable)	£0	£0	£3,217,869	£3,217,869
Total	£0	£3,217,869	£2,775,091	£3,004,439
FTE Impact Ex IT cost	0	36.00		
NOTE:	RHI Scheme cannot cope with applications. Numbers forecast by RHI.	Staff levels rise to 3 from 2 staff and 18 Band B staff in 2016.		

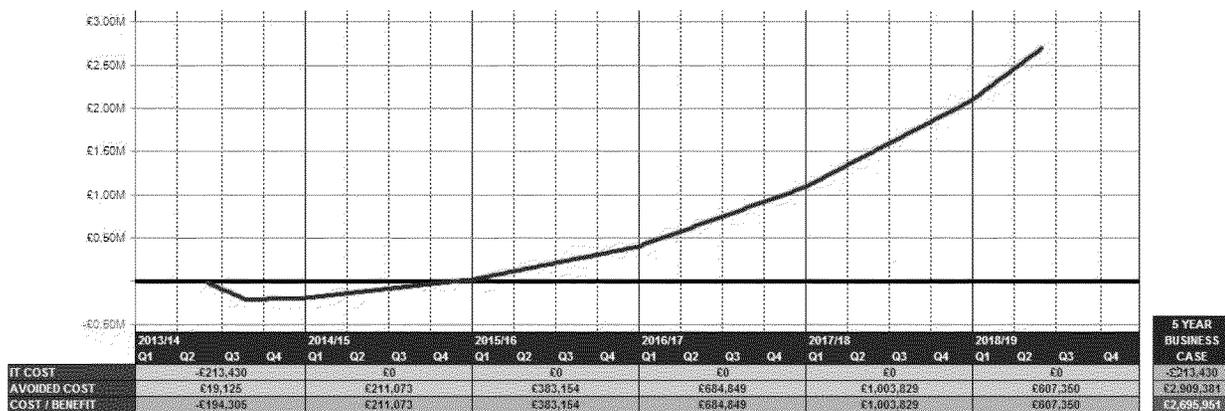
The Manual option would require a further increase in 36 FTE. However, implementing option 3 or 4 would give headcount saving over the 5 year forecast. Note: the headcount cost reduces in 2018/19 as the benefits equate to 5 months. The table below shows the impact on headcount over the 5 years if changes are not implemented.

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	5 YR TOTAL
Minutes	42,873	473,172	658,931	1,535,253	2,250,323	1,381,520	6,522,072
Managers (Band D)	0	0	1	2	2	3	
Assessors (Band B)	1.5	5	9	15.5	23	33	
TOTAL	1.5	5	10	17.5	25	36	
Managers (£)			£75,518	£151,036	£151,036	£95,850	£473,439
Assessors	£21,275	£204,867	£368,761	£635,088	£942,388	£572,052	£2,744,430
TOTAL	£21,275	£204,867	£444,279	£786,124	£1,093,424	£667,901	£3,217,869

The below benefits chart presents the payback and cost avoidance for the delivery of option 4.

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Based on the applications forecasts received from DECC and the resultant calculation of 6,522,072 minutes of activity over five years leading to a staff cost of £2,909,381 to deliver this work. The chart below shows the avoidance of these staff costs as a benefit compared to the IT costs and external of option 4 (£213,430 including a contingency of £33,235).



The other benefits are based on best assumptions. These benefits include: reduction in the number of errors; reduction in the number of complaints; more robust operational MI and continuous improvement MI; improved processes drive headcount retention have not been included.

Preferred Option- Option 4 CRM and IT Integrated solution.

Option 1 - Baseline Do nothing - RHI Scheme cannot cope with the number of applications forecast by DECC.

Option 2 – Manual solution

This option would mean no change to the current Amendments and PDS processes. The business would continue to use manual spreadsheet. This would continue to increase the exposure to fraud and human error of reviews due to the increase in headcount. Not delivering change will impact on not delivering consistency and the clarity for the applicant to achieve Right First Time (RFT) and will impact on the reputation of Ofgem with delivering it's DECC requirements

There are no IT cost associated with the manual solution but the RHI Operations team would have increase numbers to cope with the data issues from the applications. Expected headcount to rises to 3 Band D staff and 33 Band B staff in 2018, having an impact on the premises cost.

The table below provide a current and 5 year overview on cost and benefits

	DESCRIPTION	2012/13	Future 5 yr	Note
COST	There are no IT cost associated with the manual solution but the RHI Operations team would have increase numbers to cope with the data issues from the applications. This starts at 1.5 Band B staff in 2013/14 and rises to 3 Band D staff and 33 Band B staff in 2018.	£21,275	£3,196,594	36 FTE
BENEFIT	RHI scheme copes with applications forecast by DECC.	£0	£0	
	TOTAL	-£21,275	£3,196,594	

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Option 3 – IT End to End solution

Implementation of an IT End to End solution will deliver a net benefit of £2,775K for FTE quantifiable benefits. This benefit is based on IT cost of £373K including contingency and £69K due to impact on Accreditation dis synergies.

This solution is NOT recommended as it will have a negative impact on the Accreditation team as they will have to go from a single system to two systems, impacting on headcount.

For option 3 the break-even point for this option when considering the avoided staff costs as a benefit compared to the IT costs is w/c: 17-Aug-2015, with an NPV of £2,240K.

For IT external changes to the register it is recommended that the current PDS wizard is redesigned for a more seamless flow for metering data.

The below table breaks down the IT cost and benefits:

	DESCRIPTION	2013/14	Future 5 yr	Note
COST	Changes to the Register (External User) - IT cost	£51,953		122.5 days
	Changes to the Register (Internal User) - IT Cost	£136,303		321.5 days
	PM and Release	£49,184		116 days
	IT Management Overhead	£35,616		15%
	UAT and Comms cost	£7,500		
	Cantata changes	£2,625		3 days
	Total Cost	£283,181	£0	
BENEFIT	Avoidance of cost of 1.5 FTE required for 2013/14 rising to 36.0 in five years for a manual solution	£21,275	£3,196,594	
	Removal of all spreadsheets			
	Integration of Ram			
	Auto populate Ram			
	Process changes			
	Landing Page			
	Guidance notes and improved web pages			
	Removal of HOD			
	Meter changes for Amendments			
	FMS new questions			
	New questions estimated data cases			
	Search, Queues and Admin			
	Review Process including			
	Auto Calculate Heat Output Data			
	Built in Estimated Data cases			
	Improvements to register logic for PDS			
	Consistency and clarity for correspondence with Applicant (Further Information)			
Alignment of Amendments and PDS reviews				
Installation data included on the cases				
Batch approval				
Comments functionality				
	Total Benefits	£21,275	£3,196,594	
	TOTAL NET BENEFIT	-£261,906	£3,196,594	
	IT Contingency (To be held centrally)	£90,108		
	Total cost including Contingency	£373,289		

Option 4 – Integrated CRM and IT Solution

Option 3 is recommended – Implementation of an integrated in-house IT and CRM solution. This will deliver a net benefit of £3,004K for FTE quantifiable benefits. This benefit is based on IT and CRM cost of £213K including contingency. It is recommended that the IT costs are allocated from the 2013/14 budget as any delay with implementation will have an impact on Operational headcount cost in 2013/14.

It is recommended integrating with the Accreditation CRM solution for the amendments and PDS operational processes as the infrastructure for the Integration has been developed. Not implementing this solution would have a negative impact on the Accreditations team as they will have to go from one system back to two systems. This will also deliver a reduction in the ongoing support cost as CRM as super users will be trained.

IT has provided cost for both options included in the cost benefit paper and IT is in support of this recommended option.

For Option 4 the break-even point for this option when considering the avoided staff costs as a benefit compared to the IT costs is w/c: 02-Mar-2015, with an NPV of £2,420K.

Implementation of this option for both the system and processes changes will reduce the time spent on managing errors in

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data due to incorrect information provided by the Participant. This will integrate all the spreadsheets into a single systems, such as LAMB, RAM and Data Assignment; Automate the HOD calculation for the Participant, reducing 35% of errors; Integrating the Register and CRM to align to the Accreditation process; improve searching and assigning of submissions; Guidance documents improvements for RFT; Improved metering functionality for amendments, Embedding estimated data cases processes and implementing DA batch approval. These changes will ensure that requirements meet the needs of the business and mitigate the need to increase the operational head count.

The below table breaks down the IT and Cantata cost and benefits.

	DESCRIPTION	2013/14	Future 5 yr	Note
COST	Accreditation Review Process changes - Cantata cost	£56,875	£0	65 days
	Changes to the Register (Internal User) - Cantata Cost			days
	Changes to the Register (External User) - IT cost	£51,953		122.5 days
	PM and Release	£32,224		76 days
	IT Integration cost	£16,536		39 days
	IT Management Overhead	£15,107		15%
	UAT and Comms cost	£7,500		
	Total Cost	£180,195	£0	
BENEFIT	Avoidance of cost of 1.5 FTE required for 2013/14 rising to 36.0 in five years for a manual solution	-£21,275	£3,196,594	
	Removal of all spreadsheets			
	Integration of Ram			
	Auto populate Ram			
	Process changes			
	Landing Page			
	Guidance notes and improved web pages			
	Removal of HOD			
	Meter changes for Amendments			
	FMS new questions			
	New questions estimated data cases			
	Search, Queues and Admin			
	Review Process including			
Auto Calculate Heat Output Data				
Built in Estimated Data cases				
Improvements to register logic for PDS				
Consistency and clarity for correspondence with Applicant (Further Information)				
Alignment of Amendments and PDS reviews				
Installation data included on the cases				
Batch approval				
Comments functionality				
	Total Benefits	£21,275	£3,196,594	
	TOTAL NET BENEFIT	-£158,920	£3,196,594	
	IT and Cantata Contingency (To be held centrally)	£33,235		
	Total cost including Contingency	£213,430		

Other Benefits from implementing recommendations on 2012/12 and 3 years are:

- Reduction in **reputational risk**
- Improves **MI**
- **Headcount turnover and training overheads**

For IT external changes to the register it is recommended that the current PDS wizard is redesigned for a more seamless flow for metering data.

Assumptions –

FTE cost of £43,560 is the average for a six band B and one band C; 5% of time allotted to one D and E.

For manual cost calculation assumed 1 Manager for 10 FTE

IT Integration cost for option 4 are based on the Accreditation D2 delivery.

Cantata contract will be retendered due to threshold levels. However, development cost for the Option 3 will be within the threshold level. There is an opportunity that the retendered contract could reduce cost across Ofgem.

The number of PDS is based on DECC application forecasted data out to 2018/19.

Reputational risk has not been estimated. However, not meeting targets would have a major impact on Ofgem reputation with stakeholder including DECC and future schemes.

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NPV is at a 3.5%

All benefits built into this cost / benefits paper are based on a mean value. A full time motion study is underway measuring each of the benefits per recommendation. *The Full validation of benefits by time measurements will be available at the Implementation Board for the next implementation Board.*

Conclusion –

- **Option 4 is the preferred option** as the benefits delivered against the IT solutions are more cost effective than the cost in Option 2. Efficiency, clarity and consistency will be delivered and impact on reputational risk reduced. There will be no negative impact on the Accreditation team.
- Option 1 'Do nothing' Does not meet DECC objectives.
- Option 2 'Manual' is not a viable option as no improvements to clarity and consistency will be delivered. Not implementing the recommendations would leave Ofgem open to reputational risk, a major increase in operational headcount and premises; and risk of other Ofgem Schemes attracting negative press due to inefficiency.
- Option 3 is a viable option as it improves efficiency, consistency and clarity to the applicant and will work towards mitigating ofgem exposed with a data integrity risk. However, the implementation costs are higher and this will have a negative impact on the accreditations team due to increase usage of systems.