



Department for
Energy Security
& Net Zero

Energy Company Obligation

SAP and RdSAP Amendments

Government Response

March 2024



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Executive Summary

Government is updating Energy Company Obligation (ECO) legislation to Reduced data Standard Assessment Procedure 10 (RdSAP10) for evidencing purposes where RdSAP2012 would have been used previously and is supporting the implementation of transitional arrangements. This enables the use of both RdSAP versions for 6 months after the regulations come into force, and until the end of the schemes' respective final determination periods for retrofits where compliance issues arise.

Government is updating ECO legislation to allow SAP10.2 for evidencing purposes where only SAP2012 would have been required previously and will permit use of both versions until the end of the ECO4 scheme. Where definitions in ECO legislation previously referred to SAP2012 these will also be updated to refer to both SAP10.2 and SAP2012 to align with wider industry standards.

Government is retaining the current ECO scores for both ECO4 and Great British Insulation Scheme (GBIS) given fuel prices will remain stable in RdSAP10.

Government is continuing to explore arrangements for District Heating Connections.

Government is aware that requiring properties to be assessed through RdSAP10 may in some cases affect the eligibility of properties for ECO4 and the GB Insulation Scheme and/or affect the notional annual bill savings associated with their treatment. These impacts are being considered as part of a broader review of the deliverability of the ECO schemes. Later this year, government plans to consult on further changes to the schemes, and any cost impact brought about by RdSAP10 will be explored in the accompanying impact assessment.

Analysis of responses

There were 33 respondents to the consultation primarily from energy suppliers, installers and intermediaries who support ECO delivery. Sample sizes are smaller in open ended questions. Therefore, to avoid misrepresenting the data in this sample we have described the data using qualitative terminology. In outlining the response to each of the questions, “majority” indicates the clear view of more than 50% of respondents in response to that question. The following additional terms have been used to summarise the views of respondents:

- “most respondents” indicates more than 75% of those answering a particular question
- “many respondents” indicates 40%-50% of those answering the particular question
- “some respondents” refers to the range between 20% and 39%
- “a minority of respondents” means less than 20%
- “a few respondents” means fewer than 10%

All percentages have been calculated in terms of the overall responses to each question, unless otherwise stated.

Devolution

Standard Assessment Procedure (SAP) is the UK approved methodology for modelling the energy performance of homes. The Secretary of State has previously approved SAP as the methodology to:

- Demonstrate that new dwellings in England comply with energy performance standards in the Building Regulations. See this [notice of approval](#).
- Produce Energy Performance Certificates (EPCs) in England and Wales as set out in the Energy Performance of Buildings Regulations. See this [notice of approval](#).

The Building Regulations are devolved to Scotland, Wales, and Northern Ireland, while the Energy Performance of Building Regulations are only devolved to Scotland and Northern Ireland. However, historically, all UK Administrations have used an adapted version of SAP for both purposes.

ECO4 and GBIS are GB-wide policies, though some powers are devolved to the Scottish Government under the Scotland Act 2016. The Scottish Government have requested the UK Government to manage SAP and RdSAP arrangements for the ECO schemes covering Scotland. Therefore, the arrangements described in this document will apply in England, Scotland, and Wales.

1. SAP10.2 and RdSAP10

SAP10.2

1. SAP is the national methodology used to assess the energy performance of a home. A SAP assessment results in an annual estimate of a dwelling's energy consumption, running cost and carbon emissions.
2. Department for Energy Security and Net Zero (DESNZ) published an updated version of SAP (SAP10.2), which came into force on 15 June 2022, alongside the interim uplift to Part L (Energy) of the Building Regulations.
3. Some of the key methodology changes included in SAP10.2 compared to SAP2012 include:
 - Updated fuel prices, CO2 emissions and primary energy factors
 - Additional flow temperature options have been provided for heat pumps and condensing boilers and a means to recognise hybrid heat pump/boilers added
 - The self-use factor for electricity generated by photovoltaic (PV) systems has been revised and allows for the effects of battery storage and PV diverters
 - The approach to heat networks has been revised
4. A detailed list of methodology changes is listed in the SAP10.2 specification available on the Building Research Establishment (BRE) website¹.
5. Even though SAP10.2 is already live, it has not created issues with a previous version of SAP, SAP2012, currently required for ECO4 evidencing. This is because arrangements are in place which enable SAP2012 to continue to be used across the industry.

RdSAP10

6. RdSAP is the national methodology used to assess the energy performance of existing dwellings. RdSAP is a simplified version of SAP, as an Energy Performance Certificate (EPC) assessor will not have access to all the information on building material and approach used at the time of construction. RdSAP delivers a full SAP calculation if information is available; it uses defaults for some inputs in the absence of detailed information. The current live version of the scheme is RdSAP2012 v.9.94 (referred to as RdSAP2012). Government intends to release an update to RdSAP, which will be known as RdSAP10, in Spring 2024. Some of the key methodology changes included in RdSAP10 compared to the previous version, RdSAP2012, include:

¹ [bregroup.com/sap/sap10/](https://www.bregroup.com/sap/sap10/)

- Updated fabric u-values (e.g., for floor, wall, roof and window)
 - Improved calculations (consistent with SAP10.2 methodology) e.g., for heat pumps and wastewater heat recovery systems
 - Greater ability to reflect wider technology e.g., such as recognising photovoltaic (PV) batteries and divertors
 - Improving accuracy by moving away from default to measured values wherever possible e.g., assessors can input air pressure test data if available
 - Updated CO2 emissions and primary energy factors, in line with SAP10.2
7. A detailed list of methodology changes is listed in the RdSAP10 specification available on BRE's website².
8. In the consultation document this update was referred to as RdSAP10.2, however for brevity, it will now be referred to as RdSAP10.

² <https://bregroup.com/sap/sap10/>

2. SAP Update

Question 1: For ECO4 retrofits where a full SAP assessment is required, do you agree with the proposal to update legislation to require that, after a transition period, only SAP10.2 be used?

Yes: 88% No: 3% No view/Not answered: 9%

Question 2: Do you agree with a six-month transitional period from the date the amended legislation comes into force, during which either SAP2012 or SAP10.2 can be used for ECO4 retrofits that require a full SAP assessment? If not, please provide details of alternative transition arrangements.

Yes: 67% No: 18% No view/Not answered: 15%

Summary of responses

9. A majority of respondents agreed with question 1. Respondents appreciated that using the most current version of SAP is beneficial for consistency with the wider industry. Several respondents noted specific considerations around transitional timings, relating to flexibility where retrofits exceed six months, and specific arrangements in the devolved administrations. More widely, a few respondents used this question to highlight the negative impact the new methodology may have on heat pump delivery. There was also a desire to understand the impact on household EPC changes. For those that disagreed with question 1, no further information was provided.
10. A majority of respondents agreed with question 2. There were concerns raised around the alignment of the transition period and when the ECO amendment comes into force. Some respondents thought that ECO4 retrofits that involve District Heating Connections (DHCs) should be permitted a nine-month transition period noting installation complexity.
11. Of those who disagreed with question 2, one respondent thought one month would be sufficient, whilst others argued the period was too short with suggestions ranging from six to nine months to account for retrofits that include DHCs. 12 months was suggested to align with PAS changes and that a longer period would help to maintain clarity and continuity. Some respondents asked for more information on the use of SAP and which version could be used both pre-and post-retrofit.

Government response

12. Government will update evidencing requirements for ECO4 retrofits that use SAP assessments so either SAP2012 or SAP10.2 can be used. This approach will mirror wider industry which permits the use of both versions concurrently and therefore no transition period will be needed, as both SAP2012 and SAP10.2 will be allowed in legislation until after ECO4's final determination.

13. Responses to this consultation and evidence from relevant industry stakeholders indicates that outside of ECO4, industry primarily uses SAP10.2 so that assessments can benefit from the updated methodology. As such, where new ECO4 projects using SAP assessments are started after legislation has been amended, we expect these will most likely be completed in SAP10.2 so that projects can take advantage of the methodological changes. Government is confident that industry will not run into challenges using SAP10.2 as it has been live since 2022.

14. Government recognises the desire to move to SAP10.2 and the benefits of doing so. We also recognise the potential inconsistency between retrofits evidenced in SAP10.2 and scored using SAP2012 based scores. However, given the limited use case of SAP assessments in ECO4, we believe the benefits associated with the methodological changes outweigh the negatives of evidencing using SAP10.2 and scoring using SAP2012 based scores. Furthermore, allowing the use of SAP10.2, where applicable, will bring ECO into closer alignment with industry.

3. RdSAP Update

Question 3.1: Of the three options presented here for evidencing, which is your top preference and why?

Option 1: 48% Option 2: 30% Option 3: 9% No view/Not answered: 12%

Question 3.2: Of the three options presented here for evidencing, which is your second preference and why?

Option 1: 21% Option 2: 33% Option 3: 27% No view/Not answered: 18%

Summary of responses

First Preference as per question 3.1

15. Most responses aligned with the consultation text favouring Option 1 for providing most flexibility for industry as it would avoid issues related to the ECO4 minimum requirement and a delivery hiatus. Concerns were raised from software providers about running two versions of RdSAP concurrently as this has not been done previously and would come at significant cost and development time. The option was supported by TrustMark and Ofgem, primarily for simplicity across industry.
16. Option 2 was supported by some for appearing to strike a good balance between flexibility and desire to move with wider industry to RdSAP10, though concerns were raised around complexity and development time, and the costs versus benefits for TrustMark and Ofgem to support delivery.
17. Option 3 as first preference was only supported by heat pump manufacturers and heat pump trade bodies. They noted it will help realise the benefits of the new methodology sooner and will limit administrative burden. Those not in favour noted this route will lead to delivery hiatus, lost work due to unavailability of RdSAP2012, higher error rate due to rushed work in RdSAP10 and potential closure of businesses.

Second Preference as per question 3.2

18. Option 1 was favoured as second preference by those who recognised the flexibility provided but equally cited implementation difficulties. One respondent was not willing to support alternatives, so repeated their response to question 3.1.
19. Option 2 was supported for being a good middle ground if option 1 could not be made to work but respondents stressed the importance of associated system readiness and clear guidance.
20. Option 3 was supported for having simplest implementation, given minimal changes to systems, and recognition that risk to delivery may be the same as option 2, if the same ECO4 minimum requirement and scoring discrepancy issues exist.

21. A few respondents noted they felt that only option 1 or option 2 respectively are viable in practice and should be made to work at all costs.

Question 4: For options 1 and 2, do you agree that 3 months following the introduction of RdSAP10.2 is sufficient to allow the completion of retrofits?

Yes: 27% No: 58% No view/Not answered: 15%

Summary of responses

22. The majority of respondents disagreed with the suggested three-month transition, and expressed the view that a longer transition period would be more suitable. This ranged from between 4 months to 12 months, with most respondents settling on six months. Longer periods were suggested for a variety of reasons, including TrustMark's six-month assessment validity period, that projects can take much longer than three months for completion and that if RdSAP10 went live in March then the three months would conflict with the phase deadlines for both ECO4 and GBIS.

23. Of those respondents who agreed with question 4, they thought that three months was sufficient to allow completion of retrofits after introduction of RdSAP10. Several expressed the view that to prevent delays in the installation and wider rollout of heat pumps, any transition period should be minimised.

Question 5: Option 2 involves converting pre-retrofit SAP ratings from RdSAP2012 to RdSAP10. When this conversion takes place on the pre-retrofit SAP rating, there is a chance that some ECO4 retrofits may no longer meet the ECO4 minimum requirement (MR). What do you think the best approach would be to minimise this risk?

87% of respondents provided a response to this question.

Summary of responses

24. The top three suggestions in order of support were:

- Enabling installers to pre-lodge a post-retrofit Energy Performance Report (EPR) based on RdSAP2012 to prove that they would have met the minimum requirement.
- Relaxing the minimum requirement, either by half a SAP band or a full SAP band.
- Effective communication of the updates and sight of the conversion methodology in advance, allowing the industry sufficient time to prepare for the amendments.

Question 6: Are there further transition options available? Please provide details in response to this question.

Yes: 33% No: 18% No view/Not answered: 48%

Question 7: Do you believe any of the options, when applied uniformly to ECO4 and the GB Insulation Scheme, will lead to unintended consequences? Please note any mitigating options in your response.

Yes: 52% No: 9% No view/Not answered: 39%

Summary of responses

25. Most suggestions raised in response to question 6 related to, or were modifications of, the presented options in the consultation and primarily related to extending the transition period and pre-lodging post-retrofit assessments. Ofgem suggested permitting an unlimited transition period to minimise the potential impact of changing eligibility and any wider unforeseen consequences. No reasons were given where no further transition options were identified.

26. Those who felt unintended consequences were likely in response to question 7 mentioned (issues were applicable to all options unless otherwise stated):

- The need to be able to rescore work completed under RdSAP2012 where compliance issues arise.
- Risk of delivery hiatus associated with options 2 and 3 (including failure due to untested supporting systems and timelines to implement these supporting systems).
- Interaction with scheme phase changes and parliamentary timetable.
- The need for provision of robust guidance.
- Risk of gaming by delaying or expediting assessments.
- The risk of never having run two versions of RdSAP concurrently previously (specifically with option 1).
- Other risks identified by DESNZ such as changing eligibility under different methodologies or inability to meet the ECO4 minimum requirement were also reiterated.

27. Those who thought unintended consequences may not occur did not elaborate.

Government response to questions 3-7

Legislation

28. Government will be supporting the implementation of a revised version of the transition option 1 set out in the consultation. The consulted upon option 1 proposed allowing assessments to take place in either RdSAP2012 or RdSAP10 for a three-month period. This would allow pre- and post-retrofits to be conducted under either methodology

(provided the same methodology is used for both) during the transition period, but no RdSAP2012 functionality would be available after that.

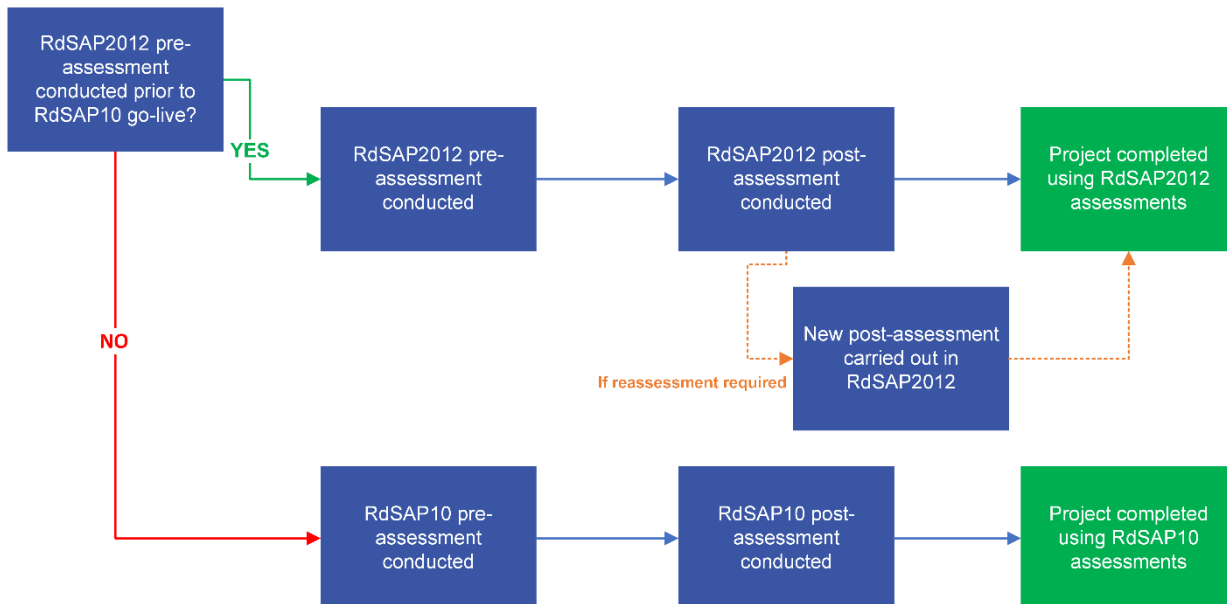
29. For the revised option 1, legislation will permit either RdSAP2012 or RdSAP10 to be used for six months after the regulations come into force. The transition period has been extended from the three months proposed in the consultation as a six-month transition was preferred to align with the six-month RdSAP assessment validity period used by TrustMark. We believe this should provide sufficient time for all retrofits started in RdSAP2012 to be completed in RdSAP2012. After this six-month period, RdSAP10 must be used to generate pre- and post-retrofit assessments for all ECO4 and GBIS retrofits.
30. In addition, under this revised approach, legislation will account for compliance cases separately. This means that after the transition period, if a new post-retrofit assessment is required for compliance purposes (for example, if a measure in one project is rejected and a new post-retrofit assessment is required to determine if that project still meets the Minimum Requirement) for a project that was originally completed in RdSAP2012, in such cases RdSAP2012 will be permitted for the new post-retrofit assessment needed for compliance until the end of scheme final determination period. All EPCs must be lodged using RdSAP10 once live, including for retrofits where only novel Data Light Measures are installed under ECO4.

Industry Process

31. Ongoing engagement with RdSAP software providers has indicated that, in practice, allowing new pre-retrofit assessments to take place in RdSAP2012 after RdSAP10 is in place is unlikely to be permitted as providers have advised that it would likely be digitally complex and costly for them to allow. Instead, the majority of software providers have indicated that they will continue allowing the generation of RdSAP2012 post-retrofit assessments to enable retrofits that started in RdSAP2012 to be completed in RdSAP2012, only where the pre-retrofit assessment took place before the “go-live” date of RdSAP10. Any new projects that start after RdSAP10 is implemented, but within the transition window, are likely to be required to be fully assessed in RdSAP10 by software providers.
32. This approach will ensure delivery continuity and therefore avoid disruption whilst industry becomes familiar with RdSAP10. Furthermore, we believe the process and regulatory arrangements described above sufficiently mitigate the unintended consequences raised in response to question 7.
33. Therefore, in practice we expect that the ECO4 and GBIS retrofit process will likely be as follows (see Figure 1):
- Retrofits completed prior to the RdSAP10 go-live date will use the current approach and be evidenced wholly by RdSAP2012 assessments.
 - Retrofits that straddle the RdSAP10 go-live date will be able to use a RdSAP2012 post-retrofit assessment, provided a pre-retrofit assessment has been completed in RdSAP2012 prior to the RdSAP10 go-live date. These retrofits will be treated in the same manner as those evidenced wholly using RdSAP2012 prior to the RdSAP10 go-live date i.e., in the same way as current retrofits.

- Retrofits started after the RdSAP10 go-live date, will be evidenced wholly by RdSAP10.
- Retrofits that need to be reassessed for compliance reasons that were evidenced by RdSAP2012 will be permitted to have a new RdSAP2012 post-retrofit assessment carried out.

Figure 1 - A flowchart of the expected process for ECO retrofits using RdSAP assessments



34. **Government can specify what is permitted through the ECO regulations (i.e., government intends to provide a six-month transition period in the legislation where both RdSAP versions can be used) but we cannot impose any requirements on software providers. As such, the delivery provisions permitted amongst software providers may vary. Therefore, we urge installers and energy suppliers to discuss provisions in place for the transition period with relevant software providers.**
35. We have been working closely with Ofgem and TrustMark to avoid administrative delays in being able to accept the relevant assessments. To note, this approach will not allow RdSAP2012 assessments to be used for EPC purposes in England & Wales after the RdSAP10 go-live date. We expect the Scottish Government to introduce the same rules. Safeguards will be established by software providers and the Department for Levelling Up, Housing and Communities, to ensure that RdSAP2012 cannot be used to lodge EPCs. Where RdSAP is concerned, ECO4 and GBIS mostly require an EPR to be lodged with TrustMark. The exception to this is that, given a retrofit consisting of only novel Data Light Measures must be lodged as an EPC, RdSAP10 must be used once live.

4. District Heating Connection (DHC) retrofits

Question 8: Do you agree with our proposal that ECO4 projects that contain a District Heating Connection (DHC) can also be evidenced by a pre-retrofit full SAP assessment lodged as an EPC?

Yes: 55% No: 0% No view/Not answered: 45%

Summary of responses

36. Those in support who elaborated agreed with DESNZ's position that full SAP assessments are more appropriate for DHCs, with some noting that uptake will increase if shared ground loops are included within that definition. Ofgem noted that this approach may risk measures delivered alongside a DHC via full SAP not being included within TrustMark's framework for consumer protection. A software provider noted lengthening the RdSAP transition to six months could remove the need for this proposal. Costs associated with generating and auditing EPCs were also mentioned.

37. No respondents disagreed with this proposal.

Government response

38. Government recognises industry desire to ensure that DHCs are appropriately accounted for under ECO4. Government intends to implement these proposals, but further work needs to be done to ensure that supporting systems can handle SAP assessments, and that existing arrangements for consumer protection and installation standards available through TrustMark are replicated for SAP where they are used in ECO retrofits that currently use RdSAP. Furthermore, delaying these changes will not restrict delivery further, as industry will still be able to use the existing approaches for DHC retrofits. These changes will continue to be explored as part of potential future amendments to the scheme.

5. Updating scoring methodologies

Question 9: Do you agree with our proposal to not require Ofgem to update their scoring methodology for ECO4 following the change from SAP2012 to SAP10.2?

Yes: 33% No: 33% No view/Not answered: 33%

Question 10: Do you agree with our proposal to not require Ofgem to update their scoring methodology for the GB Insulation Scheme following the change from SAP2012 to SAP10.2?

Yes: 42% No: 21% No view/Not answered: 36%

Summary of responses

ECO4

39. Of those who provided a view, the half in support of retaining existing scores for ECO4 highlighted consistency, continuity, and simplicity for industry. The half not in support highlighted the intrinsic link between evidencing and scoring and that inconsistency between the two could lead to delivery issues and confusion, and that the current scores are not representative of the real world. Some respondents were tentative in their views provided the scale of the impact is limited. Those who did not provide a clear view in response to the question said without seeing further analysis, they were unable to provide a view.

GBIS

40. Those in support of retaining existing scores for GBIS highlighted consistency, continuity and simplicity, and noted that updating scores may cause delivery issues. As in the response to the question for ECO4, the half not in support highlighted the intrinsic link between evidencing and scoring and that inconsistency between the two could lead to delivery issues and confusion, and that the current scores are unrepresentative of the real world. Those who did not provide a view said without seeing further analysis, they were unable to take a view. Some were tentative in their view, both for and against, if the scale of the impact is limited.

Government response

41. Government will retain existing scores for ECO4 and the GB Insulation Scheme. In lieu of formal quantitative analysis of the impact of RdSAP10, this decision is supported by qualitative analysis undertaken for Ofgem by BRE, who were contracted to create the ECO4 scores. The analysis noted that non-fuel price methodological changes to RdSAP will have a limited impact on the current ECO scores such that the current SAP2012 based scores are still applicable. Therefore, there is no clear advantage in updating these to be underpinned by SAP10.2. Doing so would necessitate updates to the overall scheme targets, and result in delivery disruption due to lengthy implementation timelines which could not occur before the RdSAP10 go-live date.

42. Although the current SAP2012 scores will be retained, government will update legislation where relevant to reflect the updates in SAP10.2 and RdSAP10 enabling any new measures to be accurately scored with reference to these methodologies where needed. Government plans to consult on introducing solar PV batteries as an ECO4 measure later this year.

Question 11: Do you think that the RdSAP and SAP updates will impact scheme delivery, and if so, how? Please provide evidence to support your response.

Yes: 64% No: 9% No view/Not answered: 27%

Summary of responses

43. Those who agreed noted the biggest concern was the potential negative impact on delivery in the period leading up to and immediately following the changeover. Some indicated that the risk may be higher for ECO4, where industry may need to relearn what projects and measures work within the scheme to meet minimum requirements. Others noted that the updates may lead to additional complexity and costs for the industry which may in turn impact delivery. Similarly, some warned of a rush to complete projects before the switch-over date.

44. Some noted without seeing further analysis or without a clear option selected, they were unable to take a view and those who thought impacts may not occur did not elaborate.

Government Response

45. We believe that the risks highlighted, such as projects not meeting the ECO4 minimum requirement under RdSAP10 and/or becoming wholly or partially ineligible for ECO4 or GBIS are limited. This is due to the continuing appropriateness of the current scores and the low likelihood of rating changes between methodologies given fuel prices are remaining stable in RdSAP10. There are several ways the remaining risks can be mitigated. We believe that the revised option 1 approach will address concerns relating directly to delivery continuity. Regarding understanding of RdSAP10, we encourage industry to make use of publications or technical bulletins ahead of RdSAP10 going live, and RdSAP10 itself when live to further explore the impacts of the methodology change.

This publication is available from: www.gov.uk/government/consultations/energy-company-obligation-schemes-standard-assessment-procedure-sap-and-reduced-data-sap-rdsap-amendments

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