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PR24 Final Methodology submission table guidance – section 5: Water resources

About this document

Version control

Version	Date published	Description
V1	7/7/2022	Draft methodology
V2	13/12/2022	Final methodology Changes from V1; No change
V3	7/2/2023	Changes from V2; WINEP/NEP investigations line has been separated out to capture those that are desk-based, those that require a survey, some monitoring or simple modelling, or those requiring multiple surveys and/or monitoring, and/or complex modelling. Addition of NEP driver codes Deletion of 'Distribution input from treatment works being supplied by improved water quality from spend on green solutions to address raw water quality deterioration' line RES1.31 Inclusion of three freeform Additional lines; water resources cost driver
V4	31/5/2023	RES1 – additional commentary requirement included in relation to items relevant to PR24 cost assessment.

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1. Summary purpose of the data tables

What data are we collecting?

- 1.1 In this section we are collecting information on water resource assets and their characteristics.

Why are we collecting the data?

- 1.2 This data will be used alongside cost data as inputs into our cost assessment models.

How is the data aligned with the annual performance report (APR)?

- 1.3 Where possible the lines follow those found in table 5A of the APR. Some lines have been updated and we have added some new lines. This reflects changing requirements at PR24 and they will form the basis of the APR table from 2025 onwards.

2. RES1 – Water resources asset data

Table RES1 line definitions

Line	Title	Definition	RAG 4.11 line reference
RES1.1	Water from impounding reservoirs	Water from impounding (gravity fed) reservoirs, including bulk supplies. Operational sources from which no water has been obtained in the report year should not be included in the number of sources. Please refer to additional guidance relating to number of sources. See RAG 4 – Appendix 2 (Water resources further guidance)	5A.1
RES1.2	Water from pumped storage reservoirs	Water from pumped storage reservoirs including bulk supplies. Operational sources from which no water has been obtained in the report year should not be included in the number of sources. Please refer to additional guidance relating to number of sources. Pumped storage reservoirs will receive an element of gravity flow. If this natural flow makes a material contribution (>20%) to the volume of the reservoir the distribution input from this source should be allocated proportionally between the two reservoir types. When reporting source numbers the source should be allocated according to the type of flow that delivers the larger part of the reservoir's input. For example, if 60% of the reservoir's volume is pumped river water the source should be counted as a pumped storage source. See RAG 4 – Appendix 2 (Water resources further guidance)	5A.2
RES1.3	Water from river abstractions	Water from river abstractions including bulk supplies. Operational sources from which no water has been obtained in the report year should not be included in the number of sources. Please refer to additional guidance relating to number of sources. See RAG 4 – Appendix 2 (Water resources further guidance)	5A.3
RES1.4	Water from groundwater works, excluding managed aquifer recharge (MAR) water supply schemes	Water from groundwater works including bulk supplies but excluding managed aquifer recharge (MAR) water supply schemes. Operational sources from which no water has been obtained in the report year should not be included in the number of sources. Please refer to additional guidance relating to number of sources.	5A.4
RES1.5	Water from artificial recharge (AR) water supply schemes	Water from AR supply schemes including bulk supplies. AR schemes are a subset of managed aquifer recharge (MAR) schemes, which functions by recharging an aquifer before or after abstraction. The water abstracted is not necessarily the water that has been recharged, so the water can be of natural quality and require more complex treatment. This excludes aquifer storage and recovery (ASR) water supply schemes (see line below)	5A.5
RES1.6	Water from aquifer storage and recovery (ASR) water supply schemes	Water from ASR supply schemes including bulk supply. ASR schemes are a subset of managed aquifer recharge (MAR) schemes, which functions by recharging an aquifer, storing that water and maintaining its quality. The water recharged is	5A.6

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Line	Title	Definition	RAG 4.11 line reference
		predominantly the water that is re- abstracted. This excludes artificial recharge (AR) water supply schemes (see line above)	
RES1.7	Water from saline abstractions	Water from saline abstractions including bulk supplies. Operational sources from which no water has been obtained in the report year should not be included in the number of sources.	5A.7
RES1.8	Water from water reuse schemes	Water from reuse schemes. Direct effluent reuse, not returned to the environment. Operational sources from which no water has been obtained in the report year should not be included in the number of sources.	5A.8
RES1.9	Number of impounding reservoir sources	Number of sources of impounding reservoirs. Please refer to additional guidance in line 17 relating to number of sources.	5A.9
RES1.10	Number of pumped storage reservoir sources	Number of sources of pumped storage reservoirs. Please refer to additional guidance in line 17 relating to number of sources. Pumped storage reservoirs will receive an element of gravity flow. The source should be allocated according to the type of flow that delivers the larger part of the reservoir's input. For example, if 60% of the reservoir's volume is pumped river water the source should be counted as a pumped storage source.	5A.10
RES1.11	Number of river abstraction sources	Number of sources of river abstractions. Please refer to additional guidance in line 17 relating to number of sources.	5A.11
RES1.12	Number of groundwater works excluding managed aquifer recharge (MAR) water supply schemes	Number of sources of groundwater works, excluding MAR water supply schemes. Please refer to additional guidance in line 17 relating to number of sources.	5A.12
RES1.13	Number of artificial recharge (AR) water supply schemes	Number of sources of AR water supply schemes. Please refer to additional guidance in line 17 relating to number of sources.	5A.13
RES1.14	Number of aquifer storage and recovery (ASR) water supply schemes	Number of sources of ASR water supply schemes. Please refer to additional guidance in line 17 relating to number of sources.	5A.14
RES1.15	Number of saline abstraction schemes	Total number of sources of saline abstraction schemes. Please refer to additional guidance in line 17 relating to number of sources.	5A.15
RES1.16	Number of reuse schemes	Total number of reuse schemes. Please refer to additional guidance in line 17 relating to number of sources.	5A.16
RES1.17	Total number of sources	The total number of sources operated by a company. This should equal the sum of lines 9 to 16. Subject to the relevant appendix in RAG4 a source is defined as an independent raw water supply that directly supplies a treatment works, such as impounding reservoirs, river abstractions, groundwater works, aquifer recharge water supply schemes, saline abstractions and reuse schemes. Standby or mothballed sources from which no water has been obtained in the year should not be included.	5A.17

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Line	Title	Definition	RAG 4.11 line reference
RES1.18	Total number of water reservoirs	All reservoirs used for holding raw water. This line shall include all impounding reservoirs and pumped storage reservoirs.	5A.18
RES1.19	Total volumetric capacity of water reservoirs	Total design/construction capacity of all reservoirs used for holding raw water. This line shall include impounding reservoirs, pumped storage reservoirs and bank side storage facilities.	5A.19
RES1.20	Total number of intake and source pumping stations	The total number of surface water intake and groundwater works source pumping stations associated with potable, non-potable and raw water systems. For the avoidance of doubt this is the number of sites as opposed to the number of individual pumps.	5A.20
RES1.21	Total installed power capacity of intake and source pumping stations	Total installed power of all abstraction pumpsets (duty, assist and standby - irrespective of the number that may be working at any one time) associated with raw water abstraction. Refer to RAG 2 Appendix 2 for proportional allocation.	5A.21
RES1.22	Total length of raw water abstraction mains and other conveyors	The length of all mains or other conveyors associated with raw water abstraction between water resources defined assets (eg a river intake pumping station and a surface water reservoir) or between the sources or from source and the first water resource asset. Include all green coloured pipework in the examples given in Appendix 2 of RAG 4.	5A.22
RES1.23	Average pumping head – raw water abstraction	Average pumping head for the raw water abstraction business unit as defined in RAG 4 and RAG 2. This is to be calculated using actual pumping head rather than the rating of the pumps.	5A.23
RES1.24	Energy consumption - water resources (MWh)	Measure of energy usage (electricity, gas, liquid fuels) by the water resource business units (irrespective of the power source). Energy usage should be measured as that which is either imported or self-generated and used in relevant business unit. No account should be taken of self-generated energy that is exported from the business unit where it is generated. Fleet transport and standby generation should be included as should an allowance for administrative buildings and head office function.	5A.24
RES1.25	Total number of raw water abstraction imports	Total number of raw water abstraction import points. Points not used in the year should be included.	5A.25
RES1.26	Water imported from 3rd parties to raw water abstraction systems	The average daily water imported from 3rd parties to raw water abstraction systems.	5A.26
RES1.27	Total number of raw water abstraction exports	Total number of raw water abstraction export points. Points not used should be included.	5A.27
RES1.28	Water exported to 3rd parties from raw water abstraction systems	The average daily water exported to 3rd parties from raw water abstraction systems.	5A.28

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Line	Title	Definition	RAG 4.11 line reference
RES1.29	Water resources capacity (measured using water resources yield)	The company level water resources capacity, which should be the sum of all company water resource zones (WRZs) across all of its licensed areas. Capacity is measured in terms of water resources yield which captures the average volume of water available from the environment and constrained by water resources control assets. See RAG 4 Appendix 2 for guidance on the calculation of water resources yield.	5A.29
RES1.30	Total number of impounding reservoir assets	Total number of impounding reservoir assets.	
RES1.31	Total number of new eels/fish entrainment screens	Total number of new schemes to prevent the entrainment of eels (EE/W_EEL or WFD/W_WFD driver codes) and migratory fish in existing abstraction intakes and outfalls (SAFFA/W_FISH/W_FISHMIT or WFD/W_WFD driver codes).	
RES1.32	Total number of new eels/fish passes	Total number of new schemes to address physical barriers to the passage of eels (EE/W_EEL or WFD/W_WFD driver codes) and migratory fish (SAFFA/W_FISH/W_FISHMIT or WFD/W_WFD driver codes).	
RES1.33	Total number of new wetlands	Total number of new wetlands to improve/ achieve/ protect/ prevent deterioration of water body objective or ecological status within a catchment (HD/W_HR, NERC/W_BIOD, SSSI/W_SSSI, WFDGW/W_WFD_GW driver codes) due to water company assets and operations.	
RES1.34	Total area of new wetlands	Total area of new wetlands to improve/ achieve/ protect/ prevent deterioration of water body objective or ecological status within a catchment (HD/W_HR, NERC/W_BIOD, SSSI/W_SSSI, WFDGW/W_WFD_GW driver codes) due to water company assets and operations.	
RES1.35	Total number of investigations; desk based only	Total number of desk based only investigations in WINEP/NEP and/or options appraisals (INV/W_INV1 and NDINV/W_NDINV1 driver codes) listed in the PR24 WINEP/NEP driver guidance documents to confirm/identify actions/determine impacts or the costs and technical feasibility of meeting targets.	
RES1.36	Total number of investigations; survey, monitoring or simple modelling	Total number of surveys, monitoring or simple modelling investigations in WINEP/NEP and/or options appraisals (INV/W_INV and NDINV/W_NDINV1 driver codes) listed in the PR24 WINEP/NEP driver guidance documents to confirm/identify actions/determine impacts or the costs and technical feasibility of meeting targets.	
RES1.37	Total number of investigations; multiple surveys, and/or monitoring locations, and/or complex modelling water	Total number of multiple surveys, and/or monitoring locations, and/or complex modelling water investigations in WINEP/NEP and/or options appraisals (INV/W_INV and NDINV/W_NDINV driver codes) listed in the PR24 WINEP/NEP driver guidance documents to confirm/identify actions/determine impacts or the costs and technical feasibility of meeting targets.	
RES1.38	Total number of investigations	Line 39 is the sum of lines 36, 37 and 38	

Line	Title	Definition	RAG 4.11 line reference
RES1.39	Additional line 1; water resources cost driver	Other water resource cost driver data not covered by other lines in the table. Where possible, companies should maintain consistency with corresponding lines in previous data submissions when using these lines.	
RES1.40	Additional line 2; water resources cost driver		
RES1.41	Additional line 3; water resources cost driver		

RES1 Additional guidance

2.1 When classifying the water into one of the categories, the following guidelines should be followed:

Water abstracted from boreholes or springs and pumped directly to a treatment works should be classified as groundwater water.

Water abstracted from a river and transported directly to a treatment works (either by pumping or by gravity) should be classified as river water.

Water that is transported directly to a treatment works from a reservoir which has been filled by a river should be classified as water from reservoirs (this is because, in general, while the water is stored in the reservoir, sediments will settle making the water easier to treat).

Water that is transported from a reservoir, via a river, to a treatment works should be classified as water from a river.

2.2 If multiple sources feed a works (for example a river and a number of boreholes) and the flow from these sources is combined prior to treatment, then all of the flow entering the works can be categorised as the more difficult to treat water. (In this example, all of the water would be categorised as river water).

2.3 Line RES1.24 relates to the energy costs associated with operating costs only. For consistency within the APR (Line 2B.1) this line should include all energy costs (including electricity, gas and fuel for vehicles, plant and machinery). These lines are intended to capture energy consumed; energy exported should not be included.

RES1 Commentary requirement

2.4 Companies should include the following commentary to this table;

- An explanation for any lines that have not been completed, for example for Welsh companies where there is not an NEP-equivalent driver to the WINEP for English companies.
- An explanation for using any of the additional lines (RES1.39 to 41) to provide driver data that is not covered elsewhere in the table.
- An explanation of any material year-on-year variations.
- An explanation of any changes in reporting methods / assumptions that have led to a material change in reported figures.
- An indication of the quality of data provided.

2.5 Companies should also include more detailed evidence in relation to line items that are used as cost drivers in PR24 cost assessment including:

- Average pumping head – raw water abstraction (RES1.23).

2.6 This should include a comparison of forecasts with historical growth rates.

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