PR24 Data Table Commentary
Section 5. Water Resources

1. Contents

2. RES1 – Water resources asset data

Table RES1, Line 1 - Water from impounding reservoirs
Historic reported values have remained consistent. These numbers are calculated on a 3-year average. 22-23 was slightly lower than the previous 2 years presumably due to it being a dry year. After consultation with the relevant company experts, it is confirmed that no changes are expected throughout AMP8.

Table RES1, Line 2 - Water from pumped storage reservoirs
Historic reported values have remained consistent. These numbers are calculated on a 3-year average. 22-23 was slightly lower than the previous 2 years presumably due to it being a dry year. After consultation with the relevant company experts, it is confirmed that no changes are expected throughout AMP8.

Table RES1, Line 3 - Water from river abstractions
Historic reported values have remained consistent. These numbers are calculated on a 3-year average. 22-23 was slightly lower than the previous 2 years presumably due to it being a dry year. After consultation with the relevant company experts, it is confirmed that no changes are expected throughout AMP8.

Table RES1, Line 4 - Water from groundwater works, excluding managed aquifer recharge (MAR) water supply schemes.
The reported volumes have been consistent since 2018/19 with only minor fluctuations. It has been confirmed with relevant company experts that the number of groundwater works will not change for the remainder of AMP7 therefore we expect little change in volumes. Review of the PR24 and WRMP submissions has confirmed there are 3 new groundwater schemes planned for AMP8. A groundwater works (GW) supply at Doncaster expected to complete 2027/2028 will provide 5 M//d. New supplies at Marton-cum-Grafton SRE and Sherwood Sandstone support to grid both to complete 2028/29 will provide 5 and 9Ml/d respectively.

Table RES1, Lines 5-8 - Water from artificial recharge (AR) water supply schemes, Water from aquifer storage and recovery (ASR) water supply schemes, Water from saline abstractions, Water from water reuse schemes
We do not currently operate any schemes of this nature; this is reflected through historic APR data which is reported as zero. After consultation with the relevant groundwater expert and a review of the PR24 submission there will be no change to these values.

Table RES1, Line 9 - Number of impounding reservoirs sources
This is a new line for PR24 and therefore so was not reported at PR19. The reported APR numbers since 2018/19 show very little change. In 2022/23 the number of impounding reservoirs increased by three, Broadstones ESR was counted as a source because it has

more than 15 days storage; Whinny Gill IRE was previously discounted as it was not in use, however as it is now in use it was counted as a source; Whitley ESR is a source because it has a natural catchment. There are no schemes planned for PR24 to alter the current value.

Table RES1, Line 10 - Number of pumped storage reservoirs sources
This is a new line for PR24 and so was not reported at PR19. The reported APR numbers since 2018/19 show very little change. There are no schemes planned for PR24 to alter the current value.

Table RES1, Line 11 - Number of river abstractions sources
Historic reported values have remained consistent. After consultation with the relevant company experts, it is confirmed that no changes are expected throughout AMP8.

Table RES1, Line 12 - Number of groundwater works excluding managed aquifer recharge (MAR) water supply schemes
The values have been consistent since 2018/19 only increasing by one in 2022/23 due to Hollin Hill Borehole becoming a groundwater source. It has been confirmed with relevant company experts that the number of groundwater works will not change for the remainder of AMP7. The PR24 and WRMP submissions have been reviewed to confirm that there are 3 new groundwater schemes planned for AMP8. A new GW supply at Doncaster expected to complete 2027/28, a new supply to Marton-cum-Grafton SRE and Sherwood Sandstone support to grid both to complete 2028/29. There are a further two existing works not currently in service that are planned to be refurbished, Brayton BH in 2025/26 and Littleworth DWI scheme in 2028.

Table RES1, Lines 13-16 - Number of artificial recharge (AR) water supply schemes, Number of aquifer storage and recovery (ASR) water supply schemes, Number of saline abstraction schemes, Number of reuse schemes
We do not currently operate any schemes of this nature; this is reflected through historic APR data which is reported as zero. After consultation with the relevant groundwater expert and a review of the PR24 submission there will be no change to these values.

Table RES1, Lines 18 & 19 - Total number of water reservoirs, Total volumetric capacity of water reservoirs
The most recently reported numbers differ by some margin from the forecast at PR19. The forecast was accurate for Years 1 and 2 of AMP7, however in 2020/21 there was a new requirement to report balancing reservoirs, previously they were included in the total number of reservoirs. In 2021/22 Tophill Low No 1 and No 2 ESR changed from Balancing to Resource. Therefore, the total number of water reservoirs increased by two. The same effect is seen on the capacity, Tophill Low No 1 ESR has a capacity of 910 Ml and Tophill No 2 ESR capacity of 773 Ml, so total capacity increased by 1,683 Ml, In 2022/23, Beaver Dyke IRE and Oakdale Upper IRE changed asset status from operational to decommissioned. The total capacity of reservoirs therefore decreased by 9.5 Ml (Beaver Dyke IRE has a capacity

of 5 Ml and Oakdale Upper has a capacity of 4.5 Ml). Therefore, the total number of resource reservoirs decreased by a further two. Looking to PR24 there is a Qualified Civil Engineer (QCE) recommendation that Bilberrry IRE reservoir should be discontinued during PR24 which has been reflected in the forecasted numbers.

Table RES1, Lines 20 & 21 - Total number of intake and source pumping stations, Total installed power capacity of intake and source pumping stations
Historic reported values have remained consistent. After consultation with the relevant company experts, it is confirmed that no changes are expected throughout AMP8.

Table RES1, Line 22 - Total length of raw water abstraction mains and other conveyors
In 2020/21 there was a slight change to three estimated mains lengths due to a validation exercise. (Birk Gill Intake to River Burn River Intake, River Burn River Intake to Spruce Gill River Intake and Spruce Gill River Intake to Leighton Reservoir). The reported numbers in the APR over the last two years have remained consistent and there are no schemes planned for PR24 so this has been carried over at the same value.

Table RES1, Line 23 - Average pumping head – raw water abstraction
There has been a small steady increase in average pumping head over time which has been reflected in the forecast by applying a 3-year rolling average.

Table RES1, Line 24 - Energy consumption - water resources (MWh)
There has been a small steady increase in energy consumption over time which has been reflected in the forecast by applying a 3-year rolling average.

Table RES1, Lines 25 & 26 - Total number of raw water abstraction imports, Water imported from 3rd parties to raw water abstraction systems
There is currently only one abstraction import agreement in place for Scammonden. There has been no abstraction recorded over the last two years and this is not expected to change going forward.

Table RES1, Lines 27 & 28 - Total number of raw water abstraction exports, Water exported to 3rd parties from raw water abstraction systems
We do not currently operate any schemes of this nature; this is reflected through historic APR data which is reported as zero. After consultation with the relevant company expert and a review of the PR24 submission there will be no change to these values.

Table RES1, Line 29 - Water resources capacity (measured using water resources yield)
Values provided are for the water resources capacity for the 1 in 500 year system response, which is what we are required to plan for in our WRMP24 baseline scenario. These values reflect the yield that would be available if we were not restricted by network asset constraints. The values decrease over time due to the impact of climate change. They are lower than those for PR19 due to the change in deployable output reporting now

being for the 1 in 500 year system response rather than that calculated using historical data.

Table RES1, Line 30 - Total number of impounding reservoirs assets
In 2022/23, Beaver Dyke IRE and Oakdale Upper IRE changed asset status from operational to decommissioned. Therefore, the total number of impounding reservoirs decreased by two. Looking to PR24 there is a Qualified Civil Engineer (QCE) recommendation that Bilberrry IRE reservoir should be discontinued during PR24 which has been reflected in the forecasted numbers.

Table RES1, Lines 31-37
The values reported are based on the expected deliverables of the WINEP programme for the remainder of this AMP and AMP8.

The confidence grades assigned to this table is C3.