

# Liquidity Cost & Cost of Carry Allowance at RIIO-ET3

A report for the ENA

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## Scope of Work & Summary of Conclusions: We estimate a cost-of-carry and liquidity allowance of 41 bps, higher than Ofgem's 13 bps, principally because we take account of greater financing need and carry-cost over RIIO-3 whereas Ofgem's approach is backward-looking

- NERA was commissioned by the Energy Network Association (ENA) to assess Ofgem's Draft Determination (DD) in relation to the liquidity cost and cost of carry allowance, which is a component of the additional cost of borrowing.
- In RIIO-3 DD, Ofgem proposes to set a consolidated cost of carry allowance and liquidity/revolving credit facility (RCF) allowance of 13bps for ET, comprising 11 bps of cost of carry allowance, and 2 bps of liquidity cost allowance. Our analysis shows:
  - Cost of Carry:** Ofgem sets a cost of carry allowance of 11bps, but Ofgem's approach is based on RIIO-2 data, which understates the RIIO-3 cost of carry for the ET sector for two reasons:
    - First, Ofgem assumes the iBoxx-cash deposit rate spread based on 5-yr average of 1.45%, but forward-looking data shows spread to be 3.00%.
    - Second, Ofgem assumes the 7.7% cash/debt ratio based on 2-yr average of RIIO-2 data. However, in RIIO-3, ET sector will require greater cash/debt ratio to support prefinancing of substantially higher RAV growth and new debt issuance over RIIO-3. We show that RIIO-3 RAV growth implies increase in cash/debt% to 12%
  - Liquidity Cost:** Ofgem sets a liquidity cost allowance of 2 bps, but does not allow cost of draw-down. In practice, companies draw facilities to fund working capital requirement/operational needs. We estimate liquidity costs of 5 bps p.a., based on evidence provided to Ofgem that shows average draw-down of 3.1%. Company data also shows greater size RCF (14.6%) relative to Ofgem (10%)
- Overall, we estimate a combined allowance of 41 bps for ET sector, comprising 36 bps of cost of carry allowance, and 5 bps of liquidity cost allowance.

### Ofgem's cost of carry and liquidity cost allowance vs NERA's estimate

Parameter	Ofgem's ET3 DD	NERA' Estimate for RIIO-ET3
Cash assumption (% debt) [A]	7.7%	12%
iBoxx-cash rate spread [B]	1.45%	3.0%
<b>Cost of carry allowance [C=A*B]</b>	<b>11bps</b>	<b>36bps</b>
RCF size assumption (% debt) [D]	10%	14.6%
RCF drawn-down assumption [E]	-	3.1%
Commitment fees [F]	16bps	16bps
Commitment fees for undrawn facilities [G]	2bps	2bps
Interest on drawn liquidity + utilisation fee [H]	-	2bps
Upfront arrangement, legal, agency fees [I]	-	1bps
<b>Liquidity allowance [J=G+H+I]</b>	<b>2bps</b>	<b>5bps</b>
<b>Total [C+J]</b>	<b>13bps</b>	<b>41bps</b>

Source: Ofgem (1 July 2025), RIIO-3 Draft Determinations – Finance Annex, paras 2.56-2.70.

## Summary of Ofgem RIIO-3 DD: In RIIO-3 DD, Ofgem sets out a liquidity allowance of 13bps for ET, comprising 11bps of cost of carry allowance, and 2 bps of liquidity cost allowance

- In RIIO-3, Ofgem considers jointly liquidity/revolving credit facility (RCF) allowance and cost of carry allowance, on the basis that the sizes of cash balances and RCFs are negatively correlated and likely to be driven by common causal factors.
- In aggregate, Ofgem sets out a liquidity allowance of 13bps for ET, comprising:
  - 11bps of cost of carry allowance, and
  - 2 bps of liquidity cost allowance.
- Ofgem's framework for estimating the liquidity/RCF and cost of carry cost is in line with RIIO-2, albeit with a small decrease from 14bps to 13bps. The main changes are as follows:
  - **Cost of carry allowance:** Ofgem's cost of carry estimate decreases to 1.45%, which is based on a 5-year average difference between i. average of iBoxx GBP A and BBB non-financial 10+ index; and ii. 3-month cash deposit rate. Such a decline from RIIO-2 is partly driven by Ofgem's adoption of iBoxx A/BBB benchmark index, rather than iBoxx Utilities 10+ index in RIIO-2.
    - However, this is offset by Ofgem's higher cash assumption from 5.0% to 7.7%, derived from the two-year average of network companies' actual cash balances and debt data. Overall, the cost of carry allowance increased from 10bps to 11bps.
  - **Liquidity allowance:** Ofgem's RIIO-3 liquidity allowance has decreased from 4 bps to 2bps driven by a lower commitment fee, which Ofgem has calculated based on a 2-year average of actual network company data at RIIO-3 DD

### Ofgem's cost of carry and liquidity cost allowance at RIIO-2 and RIIO-3 DD

Parameter	Ofgem RIIO-2	Ofgem RIIO-ET3
Cash assumption (% debt) [A]	5.0%	7.7%
Cost of carry [B]	2.00%	1.45%
<b>Cost of carry allowance [C=A*B]</b>	<b>10bps</b>	<b>11bps</b>
RCF size assumption (% debt) [D]	10%	10%
Commitment fees [E]	35-45bps (40bps)	16bps
<b>Liquidity allowance [F=D*E]</b>	<b>4bps</b>	<b>2bps</b>
<b>Total [C+F]</b>	<b>14bps</b>	<b>13bps</b>

Source: Ofgem (1 July 2025), RIIO-3 Draft Determinations – Finance Annex, paras 2.56-2.70.

# 1 | Cost of Carry

**Cost of Carry (1/3):** Ofgem’s 11bps allowance is based on 5-yr average of iBoxx-cash deposit rate spread, which is not a reliable estimate for RIIO-3. A spread based on forward rates provides a more accurate basis for estimating the cost of carry over RIIO-3, and this change alone increases cost of carry to 23 bps

- Ofgem’s cost of carry estimate is based on the following two assumptions:
  - 1) **Cost of Carry Estimate:** the five-year average difference between the average iBoxx GBP A and BBB non-financial 10+ indices and the 3-month cash deposit rate, which Ofgem calculates to be 1.45%.
  - 2) **Cash balance:** Ofgem assumes the proportion of cash and cash equivalents on networks’ balance sheets is c.8% of average debt based on an average of network companies’ 2-year actual historic data

**Ofgem cost of carry allowance vs NERA’s estimate (only updating iBoxx-cash rate spread)**

Parameter	Ofgem ET2	Ofgem ET3	NERA (*only updating iBoxx-cash rate spread)
Cash assumption (% debt)	5.0%	7.7%	7.7%
iBoxx-cash rate spread	2.0%	1.45%	3.0%
<b>Cost of carry allowance</b>	<b>10bps</b>	<b>11bps</b>	<b>23bps*</b>

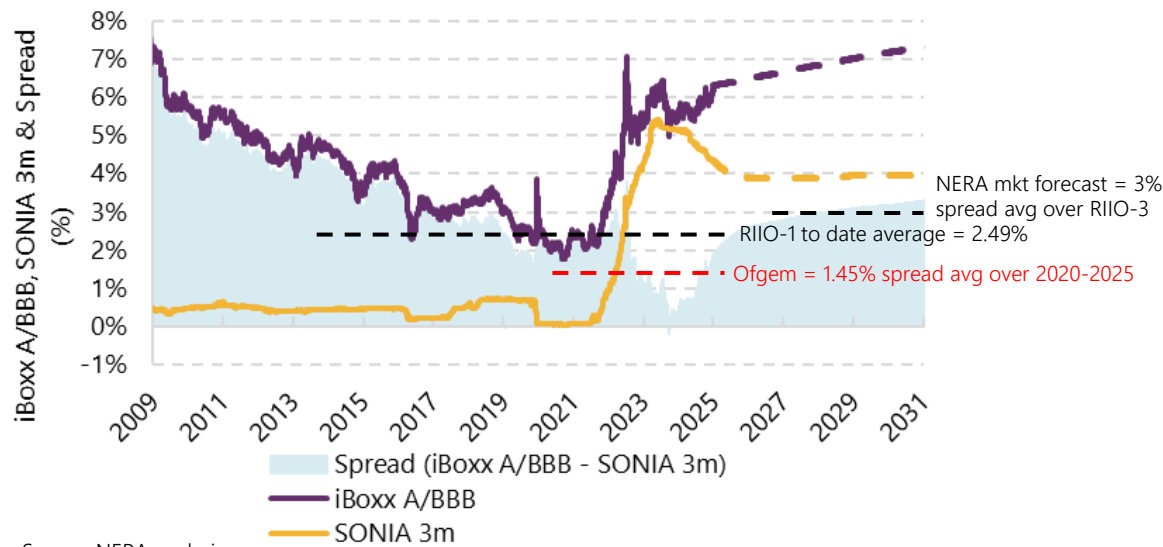
Footnote 1: \*Table above is a partial correction of Ofgem’s cost of carry estimate, and we show the full correction in next slide.

Footnote 2: Ofgem argues against the forward curve stating that it risks capturing term premium. Forward rates reflect the market’s collective expectations about future spot rates and provides a projection of future rates based on market consensus rather than subjective assumptions. Practitioners and financial institutions commonly use forward rates to forecast interest rates. For example, the OBR’s latest March 2025 forecast of 10-yr nominal gilt yield is derived based on a similar basis and projects ca 1% increase in 10-yr nominal gilt yield over next 5 years, which is in line with the forecasts based on our forward rates calculations. See OBR (March 2025), Economic and fiscal outlook, p.12.

Source: NERA analysis. Ofgem (1 July 2025), RIIO-3 Draft Determinations – Finance Annex, paras 2.56-2.70.

- Ofgem’s historical data is not a reliable estimate of carry cost for RIIO-3, as it includes 2023-24 period where spread is substantially lower than normal (See figure below)
- Ofgem’s assumption of 1.45% is low relative to the historical average iBoxx-SONIA spread since the start of RIIO-1 (Apr 2013-Mar 2025) of 2.49%
- We consider most robust approach is to draw on forward curves which provide market consensus on rates rather than relying on subjective judgements:<sup>2</sup>
  - We forecast iBoxx A/BBB and SONIA (3m) using the forward rates derived from Bank of England’s 10-yr nominal gilt spot curve and SONIA spot curve
  - Our analysis shows the average spread of iBoxx A/BBB-SONIA forecasts over RIIO-3 is 3.0%, higher than Ofgem’s assumed 1.45%. Adopting a forward-looking spread, rather than using the 5-yr historical average, increases Ofgem’s cost of carry from 11 bps to 23 bps (See LHS table)

**iBoxx A/BBB and cash rate historical and forecasts**



Source: NERA analysis.

## Cost of Carry (2/3): Ofgem's 11bps allowance is based on 2-yr average of cash/debt ratio, which does not reflect the impact of substantial RAV growth and new debt issuance in RIIO-ET3. ET3 RAV growth will require companies to hold higher cash balances than RIIO-2 to pre-finance greater debt issuance with increase in cash/debt ratio from 8% to 12%

- Ofgem estimate the cash/debt ratio of around 8% based on companies' 2-year actual data.
  - However, the assumed ca 8% cash/debt ratio understates cash/debt% for ET sector at RIIO-3, because ET sector will require greater cash balance to support prefinancing of substantially higher RAV growth and new debt issuance over RIIO-3.
  - As shown in table below, Ofgem's DD BPFM's RIIO-3 RAV forecasts shows that ET sector will require a higher cash to debt ratio of 12%, higher than 2022-24 average of ca 8% used by Ofgem

### RIIO-ET3 cash/debt ratio expected to 12%, due to higher debt issuance

		ET sector average RAV - end of year (normalised)	Notional Debt (RAV*55%) - end of year	New debt issuance	Cash balance for 6-month pre-finance	Notional Debt - average balance	Cash/Debt ratio
		A	B=A*55%	Ct=Bt-Bt-1	Dt=1/2*Ct+1	Et=(Bt+Bt-1)/2	F=D/E
RIIO-2	21/22	100	55	-	5.7	55	10%
	22/23	121	66	11	4.4	61	7%
	23/24	136	75	9	6.8	71	10%
	24/25	161	89	14	9.6	82	12%
	25/26	196	108	19	19.1	98	19%
RIIO-3	26/27	266	146	38	21.0	127	17%
	27/28	342	188	42	22.3	167	13%
	28/29	423	233	45	21.5	211	10%
	29/30	502	276	43	20.5	254	8%
	30/31	576	317	41	-	296	-
Ofgem's 2022-24 average							8%
RIIO-3 average							12%

Note: RIIO-3 average is based on the first four years due to the lack of RIIO-4 RAV f'cast to calculate the RAV growth for 2030/31.

Source: NERA analysis of Ofgem's DD BPFM RAV forecast.



- In the table below, we show the following analysis:
  - In Column A, we model the average ET sector RAV over RIIO-2 and RIIO-3 by creating an indexed sector RAV, starting at 100 at the beginning of RIIO-2 and growth rate based on the ET sector's historical (for RIIO-2) and forecast (for RIIO-3) nominal RAV growth.
    - The historical and forecast RAV data are sourced from Ofgem's DD BPFM models. We use an equal-weighted average growth rate to ensure that sector growth is notional / not dominated by NGET
  - In Column B, we calculate the notional debt by multiplying the indexed sector RAV by 55% notional gearing, with new debt issuance (Column C) determined as the difference in debt balances between consecutive years
  - In Column D, we calculate the cash associated with pre-financing the new debt issuance six months ahead, i.e., assuming half of the new debt issuance amount, which results in a cash balance in the prior year due to pre-financing.
  - In Column E, we calculate the average notional debt balance and express the cash associated with pre-financing as a percentage of the average notional debt balance for the corresponding year (Column F)
- Our analysis shows:
  - Our modelling is aligned with Ofgem's assumed 8% cash/debt ratio for average of 2022-24, as per companies' data (i.e. average of yellow highlighted figures in column F approximate to 8%)
  - In RIIO-3, ET sector will require greater cash/debt ratio to support prefinancing of substantially higher RAV growth and new debt issuance over RIIO-3. This increases the cash/debt% from 8% (2022-24) to 12% (average RIIO-3)
- Our estimate of cash/debt ratio of 12% is conservative for the following reasons:
  - 1) Totex scenario: the 12.0% cash/debt ratio is derived based on RAV forecast under the base case totex. Under higher totex scenario (+5% for ET), the cash/debt ratio would be 12.4% at RIIO-3
  - 2) Pre-financing period: we have assumed 6-month pre-financing period for RIIO-3 which is same as RIIO-2, whereas the high RAV growth in RIIO-3 would likely require longer prefinancing period of 9-12 month, which would increase the cash/debt% to 18%-24%.

**Cost of Carry (3/3):** In conclusion, we estimate cost of carry of 36bps, based on 3% forecast iBoxx-cash deposit rate spread and 12% cash/debt ratio over RIIO-3

- In conclusion, Ofgem’s cost of carry allowance is based on RIIO-2 backward-looking data, which understates the RIIO-3 cost of carry for the ET sector for two reasons:
  - First, Ofgem assumes the iBoxx-cash deposit rate spread to be based on 5-yr average of 1.45%, but forward-looking data suggests the spread to be 3.0%.
  - Second, Ofgem assumes the 8% cash/debt ratio based on 2-yr average of RIIO-2 data. However, in RIIO-3, ET sector will require greater cash/debt ratio to support prefinancing of substantially higher RAV growth and new debt issuance over RIIO-3. This increase the required cash/debt% to 12%
- Overall, we estimate the cost of carry to be 36 bps, reflecting forecast iBoxx-cash deposit rate spread, and higher cash/debt ratio over RIIO-ET3

**Ofgem cost of carry allowance vs NERA’s estimate**

Parameter	Ofgem T2	Ofgem ET3 DD	NERA (Aug 2025)
Cash assumption (% debt) A	5.0%	7.7%	12%
iBoxx-cash rate spread B	2.0%	1.45%	3.0%
<b>Cost of carry allowance (C=A*B)</b>	<b>10bps</b>	<b>11bps</b>	<b>36bps</b>

Source: NERA analysis



## 2 | Liquidity & RCF Cost

## **Liquidity/RCF Cost (1/2):** Ofgem sets a liquidity cost allowance of 2bps, but it does not allow cost of draw-down and understates size of RCF facilities. In practice, companies on average draw 3% facilities to fund working capital requirement/operational needs and maintains RCF of 14.6% of debt – higher than 10% assumed by Ofgem

- In our February 2024 report, we estimate average liquidity cost to be at 13 bps p.a. of notional debt based on:
  - Ofgem’s assumed 35-45 bps p.a. commitment fee and facility size of 10 per cent of debt, as per RIIO-2
  - Annual utilisation fee: 20bps of drawn credit facility amount
  - Interest on the liquidity facility: SONIA + 45 bps
  - Assume facilities are on average 15% drawn to fund working capital
- Ofgem assumes 2 bps for RIIO-3 DD, and makes the following comments:
  - Ofgem argues that its RIIO-3 DD approach uses more frequent company data, and is therefore more robust than relying solely on year-end data (NERA’s approach), which may not capture intra-year fluctuations during operational cycles
  - Ofgem states that NERA estimates a higher liquidity allowance assuming draw down of 15% of RCF and associated utilisation fees and interest costs. In contrast, Ofgem assumes no-draw-down, and does not consider utilisation fee or associated margin w.r.t RCF, as it argues most network companies do not normally draw upon RCF given its role as a liquidity backstop.
  - Ofgem does not consider upfront costs (e.g. arrangement and legal fees) in setting liquidity allowance, given that these fees are small relative to the overall costs
- We consider that Ofgem’s RIIO-3 liquidity cost analysis is wrong on the following points:
  - **1) Utilisation fee & Margin:**
    - Ofgem does not allow for utilisation fee or associated margin as most companies do not draw down on the RCF. However, Ofgem is wrong to assume such costs will be zero. We have collected intra-year cash balance data from the companies, as referenced by Ofgem in the DD.
    - Our analysis shows that on average companies draw down 3.1% of their RCF facilities over the last two years (2022-2024). The utilisation fee and the associated margin should be reflected in the allowance
  - **2) Size of RCF:**
    - Ofgem derives that RCF facilities size to cover 10% of companies' debt, based on a two-year average of actual RCF and debt data reported by network companies.
    - However, using the same data as referenced by Ofgem in the DD, we calculate the average RCF facilities to be 14.6% of companies’ debt including all companies
  - **3) Costs of maintaining RCF:**
    - Ofgem’s 16bps only reflects commitment fees, and ignores other potential costs such as upfront arrangement fees, legal fees and annual (agency) fees , although these additional costs are small and of the order of ca 1 bps p.a.

Note: Ofgem (1 July 2025), RIIO-3 Draft Determinations – Finance Annex, paras 2.56-2.70.

# **Liquidity/RCF Cost (2/2):** We estimate liquidity costs of 5 bps p.a. assuming RCF facilities 3.1% drawn and incurs utilisation and margin cost, and RCF sized to be 14.6% of debt based on companies' data

- We estimate average liquidity cost to be at **5 bps** p.a. of notional debt based on the following:
  - **Commitment fees:** consistent with Ofgem’s assumed 16 bps p.a., and in line with companies’ data submitted to Ofgem
  - **RCF size:** 14.6% of debt based on an average of all energy network companies' 2-year actual historic RCF and debt data, rather than Ofgem’s assumed 10% of debt
  - **RCF drawn%:** 3.1% based on companies' data on drawn RCF facilities over the last two years (2022-2024) compared to Ofgem’s assumption of no draw-down
  - **Utilisation fee:** 10 bps of drawn credit facility amount based on companies' data
  - **Interest on the liquidity facility:** SONIA + 45 bps
- Overall, we estimate 5 bps p.a. liquidity cost, comprising 2 bps of commitment fees on undrawn facilities, and 2 bps of margin costs based on 3.1% drawn amount.

	Parameter	Ofgem T2	NERA (Mar 2024)	Ofgem RIIO-3 ET	NERA (Aug 2025)	NERA’s approach
Inputs	RCF size assumption (% debt) [A]	10%	10%	10%	14.6%	Based on average of network companies' 2-year historical RCF and debt data
	RCF drawn-down assumption [B]	-	15%	-	3.1%	Based on companies' data on drawn RCF facilities over the last two years over 2022-2024
	Commitment fees [C]	35-45bps (40bps)	35-45bps (40bps)	16bps	16bps	Consistent with Ofgem and in line with companies' data
Calculations	Commitment fees [D] – weighted basis		3bps	2bps	2bps	2bps calculated as 16bps commitment fee * 14.6% RCF size * (1-3.1% drawn amount)
	Interest on liquidity facility and utilisation fee [E] – weighted basis	-	9bps	-	2bps	2bps calculated as 4.4% (SONIA f’cast+45bps) * RCF size of 14.6% * 3.1% facilities drawn Utilisation fees of 0.04 bps calculated as 10 bps utilisation fee of drawn credit facility amount * RCF size of 14.6% * 3.1% facilities drawn
	Upfront arrangement, legal, agency fees [F]	-	0.8bps	-	1bps	7bps of upfront fees * RCF size of 14.6%
<b>Liquidity allowance [G=D+E+F]</b>		<b>4bps</b>	<b>13bps</b>	<b>2bps</b>	<b>5bps</b>	

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