

# Opex in Abu Dhabi's Utility Sector

Operating expenditure (Opex) refers to the ongoing costs required to run a utility's daily operations: staff salaries, repairs and maintenance, customer service, IT systems, and other essential operational activities. Though less visible than capital investments, Opex is what ensures the continuous delivery of utility services across water, wastewater, and electricity networks.

In Abu Dhabi's regulated utility sector, Opex plays a central role in price [regulation](#). The regulator sets operating cost allowances based on what is judged to be efficient and necessary. These allowances are then used in calculating the Maximum Allowed Revenue (MAR) each company may recover. The goal is to strike a balance: allowing companies to recover prudent operating costs without passing unnecessary expenses on to consumers. This structure aligns with the principles of incentive regulation discussed by Joskow ([2008](#)), who reviews how price cap regulation, such as CPI-X, creates efficiency incentives in electricity networks by linking allowed revenues to external benchmarks and performance.

Over the past two decades, the methodology for [determining](#) Opex allowances has evolved significantly, reflecting growing regulatory sophistication and shifting sectoral priorities.

**Figure 1: Opex projections for network companies (2016 prices)**

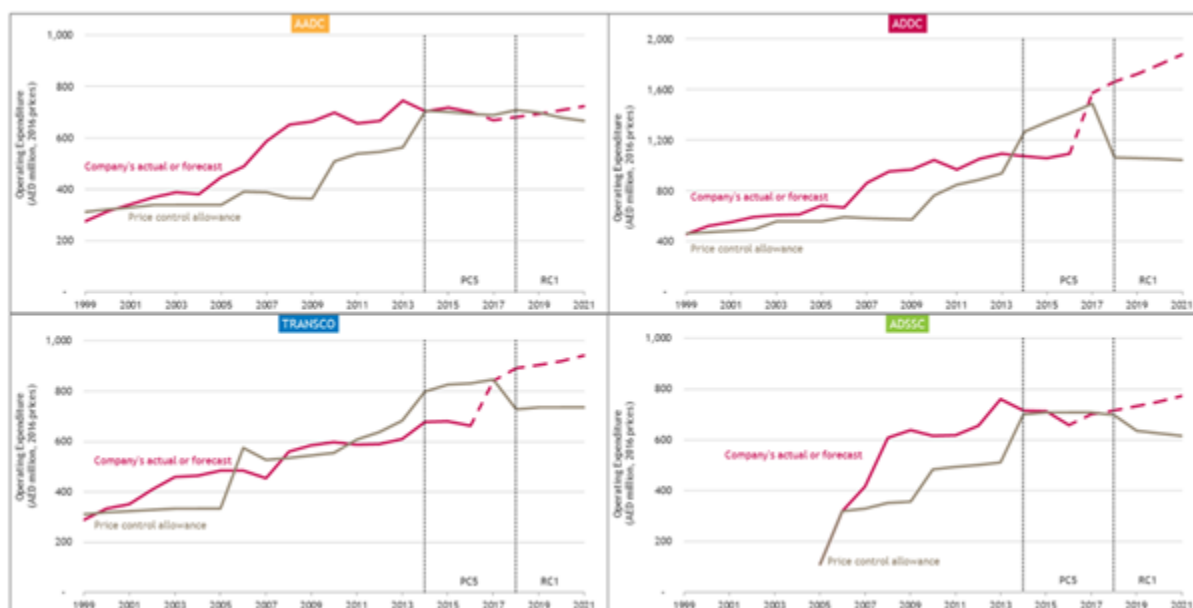
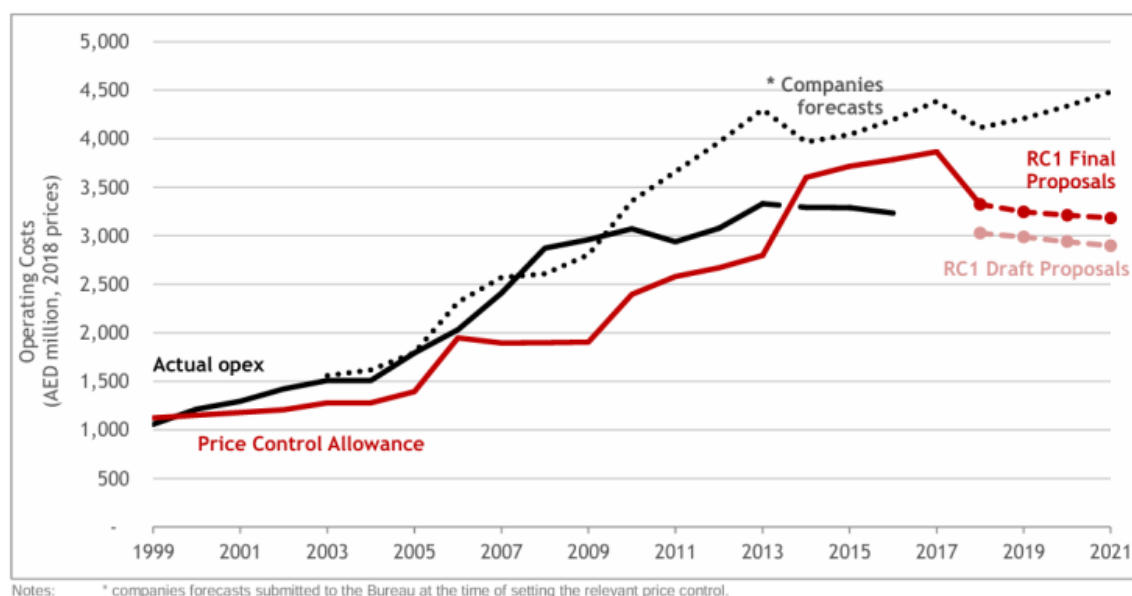


Figure 1 illustrates the divergence between companies' actual or forecasted Opex and the allowances set by the regulator across the major network licensees (AADC, ADDC, TRANSCO, and ADSSC) between 1999 and 2021. Across all four companies, actual or forecast costs (in pink) generally exceeded the price control allowances (in brown), particularly during and after PC5. This trend highlights the regulator's increasingly conservative stance on allowed costs, and the growing gap between company expectations and what is deemed efficient. Notably, the step change around 2009 reflects the sectoral restructuring and price control separations, while the flattening of allowances in RC1 suggests a deliberate tightening of operating budgets under the new regulatory regime.

**Figure 2: RC1 final opex projections - comparison on aggregate level**



In Figure 2, the graph aggregates the Opex trends across all network companies, comparing actual costs, company forecasts, and regulatory allowances from 1999 to 2021. A consistent pattern emerges: companies typically forecast higher spending than what the regulator ultimately allows, with actual expenditures often landing between the two. The sharp downward revision in the RC1 final proposals (2018-2021) compared to both the draft proposals and company forecasts is particularly notable, reflecting the regulator's effort to enforce tighter discipline during this period. This illustrates how the regulatory approach has shifted toward more conservative assumptions and a firmer stance on cost containment.

In essence, the regulatory structure simulates competitive market pressures: companies are expected to operate within reasonable cost constraints (in this case, the cost

envelope defined by the regulator). If they overspend, they typically bear the loss; if they underspend, they may retain a portion of the savings. This structure creates direct incentives for utilities to manage costs carefully without compromising service quality. That said, these cost incentives can have unintended effects. If not closely monitored, they may encourage companies to defer maintenance or reduce customer service inputs to stay within budget, potentially affecting long-term service quality. Regulators must therefore pair financial discipline with robust performance monitoring to ensure that cost efficiency does not come at the expense of reliability or consumer satisfaction.

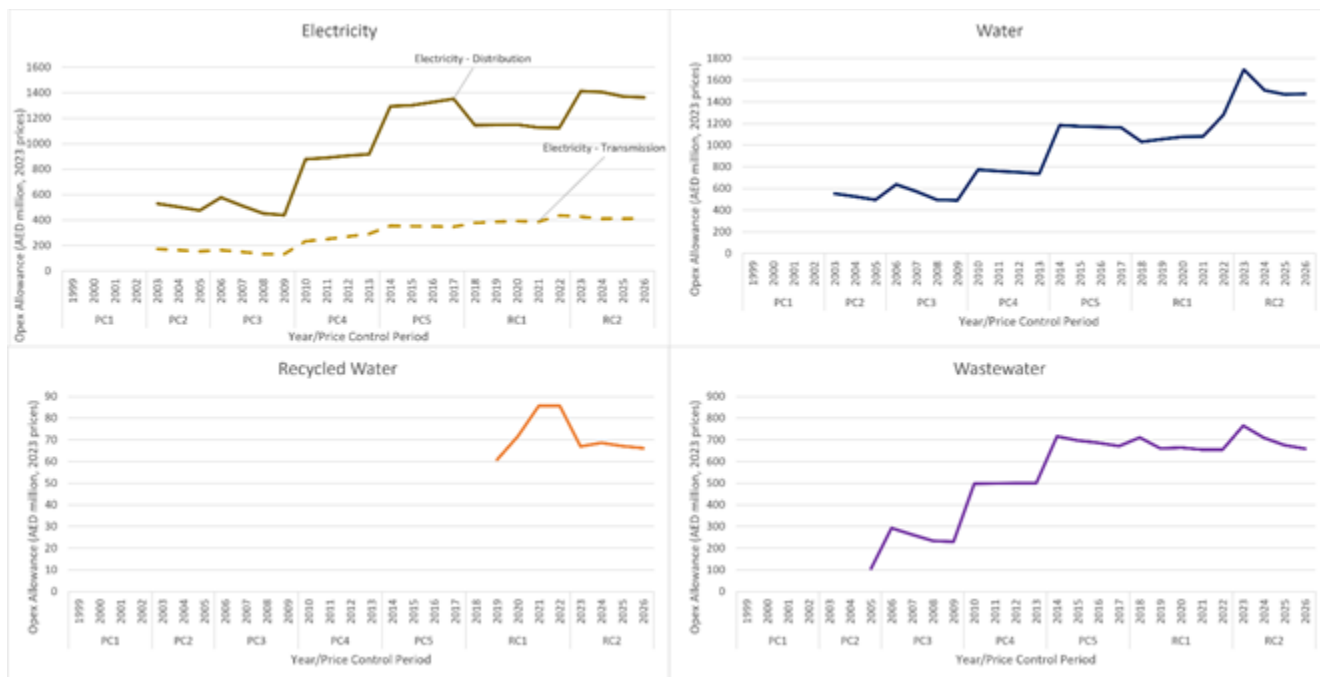
## The Evolution of Opex Allowances

Since the introduction of Abu Dhabi's first Price Control (PC1), the regulator has used an “[RPI-X](#)” form of [control](#), which places a ceiling on the aggregate level of allowed revenues for each year of the control period, thereby covering Opex as well. In PC1, the inflation term (“ $CPI_t$ ”) was based on a composite [index](#) (80% UAE CPI and 20% US CPI) reflecting the split between locally incurred and internationally sourced costs. The X-factor was intended to reflect [profiling](#) rather than enforce efficiency mechanisms directly. Over time, Opex allowances evolved not just due to inflation adjustments but also as a result of changes in the methodology used to assess efficient costs.

The Bureau therefore confirms RPI-X as the form of price control of ADWEC's procurement costs.

Between control periods, shifts in approach led to step changes in allowed Opex, as can be seen in Figure 3 below. Within a given control period, annual adjustments also varied across sectors, reflecting differences in how cost drivers and demand growth were handled for water, wastewater, and electricity services.

**Figure 3: Opex Allowances for Each Utility Sector**



During PC1 (1999–2002), the regulatory approach to Opex was relatively unstructured. There was no benchmarking across companies or application of efficiency assumptions. Instead, Opex allowances were based primarily on historical data, particularly the [1997 and 1998 income statements](#). In cases where that data was insufficient, as was the case with ADWEC, the regulator relied on information from other relevant sources such as company budgets, recent spending figures, and benchmarks from Northern Ireland Electricity to establish a reasonable baseline.

### Assessing Future Operating Costs

The Bureau has reviewed information from a number of sources to inform its assessment of ADWEC's future costs. In setting the price controls of other licensed companies the Bureau made use of those companies' 1997 and 1998 income statements. ADWEC's income statements are not helpful to the present exercise. This is because the responsibilities and functions now undertaken by ADWEC were previously undertaken by various sections of WED and it has not been possible to provide a meaningful assessment of these costs in the past. Nevertheless, the Bureau has reviewed and made use of information from the following sources:

- ADWEC's 1999 budget;
- Spend to date figures for January 1999 to August 1999; and
- Cost information of the procurement business of Northern Ireland Electricity.

This initial approach offered limited assurance of cost efficiency, as it lacked structured links to demand and no mechanisms for continuous improvement. These gaps laid the groundwork for future reforms in how Opex was assessed and allocated.

The approach began to shift in PC2 (2003–2005), when the regulator introduced a more structured methodology. A [base-year model](#) was adopted, using 2001 as the reference year for operating costs. Under this approach, Opex allowances were projected on the basis that Opex across the control period would remain constant at its 2001 level in real terms, with the assumption that efficiency improvements over the period would offset the effects on opex of demand growth.

The Bureau has projected operating expenditure (opex) for the period 2003–2005 on the basis that opex can remain constant in real terms at its level in 2001. This assumes that the effect on opex of demand growth over the period can be offset by efficiency improvements.

Where companies faced cost increases due to factors beyond routine operations (such as organisational restructuring or sharp rises in demand) those costs were not automatically included in the allowance. Instead, they were earmarked for review during the next price control period, allowing for [retrospective consideration](#).

For the first time, the regulator applied a common set of parameters across all network licensees including a unified base year (2001), shared CPI assumptions, and standardised cost classifications support to more transparent and comparable allowance setting. This

marked the beginning of a more systematic approach to setting Opex allowances based on comparability, predictability, and evidence.

**Table 1: Operating Expenditure Allowances in PC2 - Final Proposals**

AED m, 2003 prices	2003	2004	2005
ADWEC (1)	9.798	9.798	9.798
TRANSCO Electricity	96.809	96.809	96.809
TRANSCO Water	93.255	93.255	93.255
ADDC Electricity	196.367	196.367	196.367
ADDC Water	122.575	122.575	122.575
AADC Electricity	100.117	100.117	100.117
AADC Water	93.097	93.097	93.097

Note (1): Includes capital expenditure (ADWEC only)

With PC3 (2006–2009), the regulator introduced a more formula-driven methodology for setting Opex allowances. The 2004 cost base served as the [starting point](#) for projections. Allowances were then adjusted upward based on forecast demand growth, specifically by 0.75% for every 1% increase in projected service volume.

In parallel, a 5% annual reduction was applied to reflect assumed productivity gains. This adjustment reflected expectations that companies could lower costs over time through improvements in procurement, automation, or operational efficiency. Importantly, this assumed efficiency was embedded in the cost allowances themselves, rather than enforced through the X-factor, which in Abu Dhabi remained a revenue profiling tool rather than a driver of efficiency.

The Bureau has projected operating expenditure (opex) for 2006 – 2009 at the level (in real terms) of each business in 2004, with the following adjustments:

- Opex is assumed to increase by 0.75% for each 1% increase in demand; and
- Assumed efficiency improvements of 5% a year in real terms.

This approach mirrors elements of UK electricity distribution price controls, where fixed annual efficiency factors are applied within CPI-X frameworks. Jamasb and Pollitt ([2007](#)) provide an overview of how such productivity assumptions have been incorporated in UK regulation.

This method established a clearer baseline for expected performance and introduced greater consistency across licensees. It signalled a shift in regulatory stance away from



cost allowances and toward more disciplined, model-based projections of what efficient operations should cost.

Even so, the introduction of formula-driven assumptions (such as the 0.75% cost scaling for every 1% increase in demand) raised questions for some observers. While these mechanisms aim to standardise projections, they can also appear somewhat mechanistic or arbitrary if not clearly justified by empirical data. Over time, some stakeholders have cautioned that increasing methodological complexity may obscure assumptions rather than clarify them.

**Table 2: Opex Projections for PC3 - Draft Proposals**

<b>AED million, 2006 prices</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
AADC Electricity Distribution	119.647	118.912	118.182	117.456
AADC Electricity Supply	38.161	37.208	36.278	35.372
AADC Water Distribution	74.466	73.861	60.762	60.170
AADC Water Supply	11.634	11.302	10.979	10.666
ADDC Electricity Distribution	197.722	195.617	193.534	191.474
ADDC Electricity Supply	39.426	38.086	36.791	35.541
ADDC Water Distribution	97.702	96.500	95.313	94.140
ADDC Water Supply	33.865	32.727	31.627	30.564
ADWEC Electricity	9.849	9.924	9.999	10.075
ADWEC Water	5.751	5.794	5.837	5.881
TRANSCO Electricity	111.418	112.856	114.312	115.787
TRANSCO Water	216.823	220.409	224.064	227.789
Electricity – Total	516.223	512.602	509.097	505.706
Water - Total	440.240	440.593	428.583	429.210
<b>Grand Total</b>	<b>956.463</b>	<b>953.195</b>	<b>937.680</b>	<b>934.915</b>

Notes: (1) Excludes depreciation in all cases. (2) Includes capital expenditure for ADWEC.

In PC4 (2010–2013), the regulator retained the overall structure of the PC3 approach but introduced refinements to how the base cost was established. Rather than relying solely on a single year's expenditure, as had been done previously, the base Opex for each company was calculated as the [simple average](#) of the 2008 actual Opex and the 2009 projected Opex, both expressed in 2010 price terms. The base Opex was then adjusted for demand growth and efficiency improvement (as in the previous price control: 0.75% opex increase per 1% increase in demand, and 5% opex decrease annually in real terms).

This adjustment allowed the regulator to better capture cost trends that had emerged during the preceding control period, while still anchoring the new allowances in

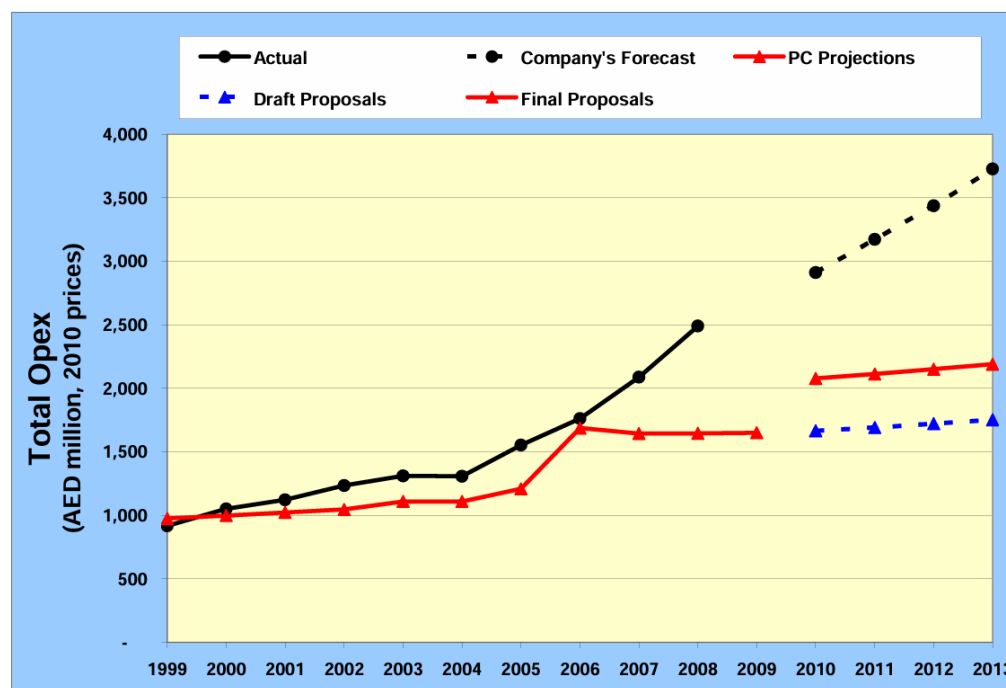
efficiency-based assumptions. It reflected a growing emphasis on smoothing year-to-year fluctuations without relaxing expectations around prudent cost management.

For these Final Proposals, we have used the simple average of (a) opex projected for 2009 at the last price control reviews, and (b) 2008 actual opex, both converted into 2010 prices, as the base level of opex for the PC4 controls.

**Table 3: PC4 Opex Projections – Final Proposals**

AED million, 2010 prices		2010	2011	2012	2013
AADC	Electricity	310.92	309.89	308.87	307.84
	Water	146.75	144.92	143.11	141.32
	Total	457.67	454.81	451.97	449.16
ADDC	Electricity	454.57	473.46	493.13	513.61
	Water	232.77	229.93	227.12	224.35
	Total	687.34	703.38	720.25	737.96
TRANSCO	Electricity	202.90	220.55	239.73	260.58
	Water	295.56	295.29	295.02	294.75
	Total	498.46	515.84	534.75	555.32
ADSSC	Total	434.37	438.85	443.38	447.95
<b>Total</b>		<b>2,077.84</b>	<b>2,112.88</b>	<b>2,150.34</b>	<b>2,190.40</b>

**Figure 4: PC4 Opex Projections - Final Proposal**





Opex regulation evolved further in PC5 (2014–2017), during which the sector experienced a marked increase in allowed operating costs. Compared to the previous control period, average annual Opex allowances were significantly higher, driven not only by inflation but also by a reassessment of utility responsibilities and service obligations. According to final regulatory proposals, proposed Opex allowances were greater than the draft proposals by approximately AED 820 million per year (in 2012 prices) relative to the draft values.

The proposed opex allowances are higher than various comparator figures on average over the PC5 period in real 2012 prices:

- (a) higher than the draft proposals for each company by 21% - 42% or in aggregate by about AED 820 million per annum or 33% in 2012 prices (or AED 834 million per annum or 33% in 2014 prices);

This increase reflected the expanding responsibilities of the network companies. It [covered growing commitments in areas](#) such as training, Emiratisation, tariff reform implementation, health and safety compliance, and enhanced business planning functions. It also accounted for additional energy costs associated with more complex water pumping requirements, as infrastructure grew in scale and geographical reach.

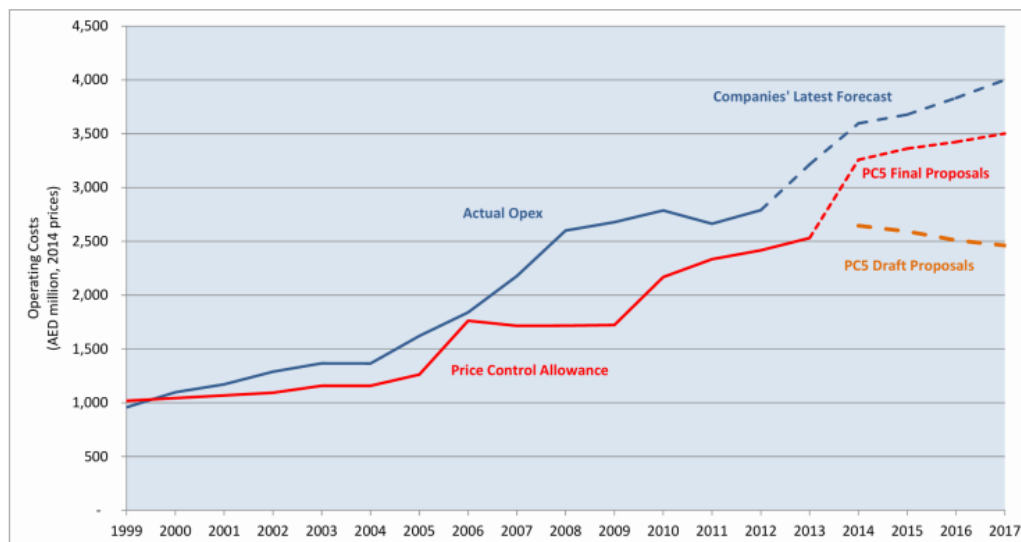
Our final opex projections exclude a number of costs or activities identified by network companies as further discussions and explanations are required to make adjustments for these items. However, these projections include various specific cost allowances for additional roles and responsibilities (eg, Emiratisation, training and apprenticeship, mega developments, energy costs for additional water pumping) as well as capability building in important areas (eg, demand side management, risk management, business and financial planning, tariff reforms, health and safety). These projections will be adjusted during the PC5 period for various parameters and further responsibilities.

**Table 4: [PC5 Opex Projections \(2014 prices\) - Final Proposals](#)**

AED million, 2014 prices		2014	2015	2016	2017	Average
AADC	Electricity	416	416	413	413	414
	Water	246	243	238	233	240
	Total	662	659	651	646	654
ADDC	Electricity	771	825	873	927	849
	Water	417	438	453	468	444
	Total	1,188	1,263	1,326	1,395	1,293
TRANSCO	Electricity	326	337	339	345	337
	Water	424	438	441	450	438
	Total	750	775	781	795	775
ADSSC	Total	657	665	665	665	663
<b>Total</b>		<b>3,257</b>	<b>3,362</b>	<b>3,423</b>	<b>3,501</b>	<b>3,386</b>

Below, Figure 5 shows how the final Opex allowance (red dashed line) significantly exceeded the draft proposals (orange dashed line) yet remained below the companies' own latest forecasts (blue dashed line). The chart also highlights the continued gap between actual Opex and the regulator's cost envelope, consistent with the regulator's approach in balancing expanding responsibilities with efficiency discipline.

**Figure 5: [PC5 Final Opex Projections \(2014 prices\)](#)**



Although the allowances were higher, it is evident that the regulator opted to maintain a conservative approach. The final values were consistently lower than the companies' submitted forecasts, preserving the principle that Opex should reflect an efficient, not aspirational, level of expenditure.

## Shared Methodology: From PC5 to RC1 and Beyond

The shift from PC5 to RC1 marked a refinement of Abu Dhabi's approach to setting Opex allowances. Deloitte's 7-step methodology, illustrated in Figure 6, built on the PC5 framework by blending top-down projections with bottom-up efficiency benchmarking. This dual-track method aimed to reconcile high-level cost trends with operational realities across the utilities.

Abu Dhabi's approach here is an application of "yardstick competition" (Shleifer [1985](#)), using cost comparisons across similar firms to set efficient allowances and sharpen managerial incentives in monopoly regulation.

**Figure 6: Consultant's seven-step methodology to RC1 opex projections**

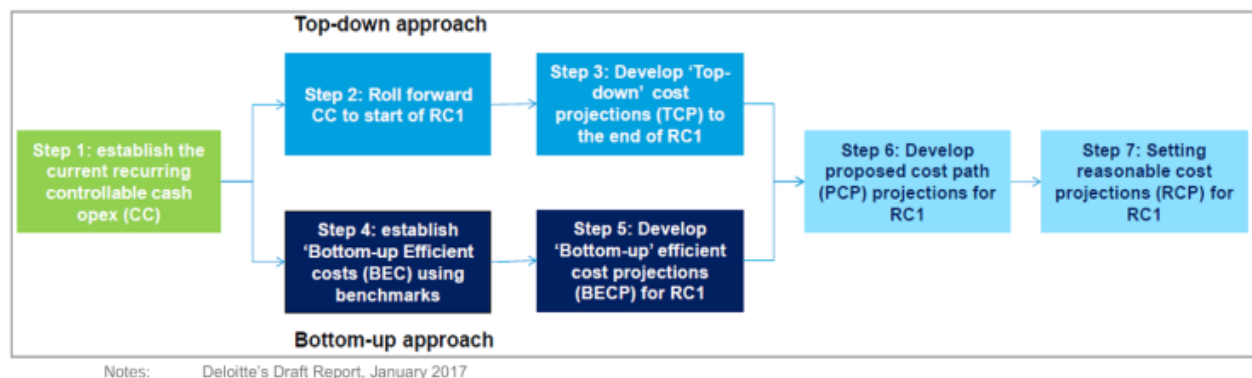
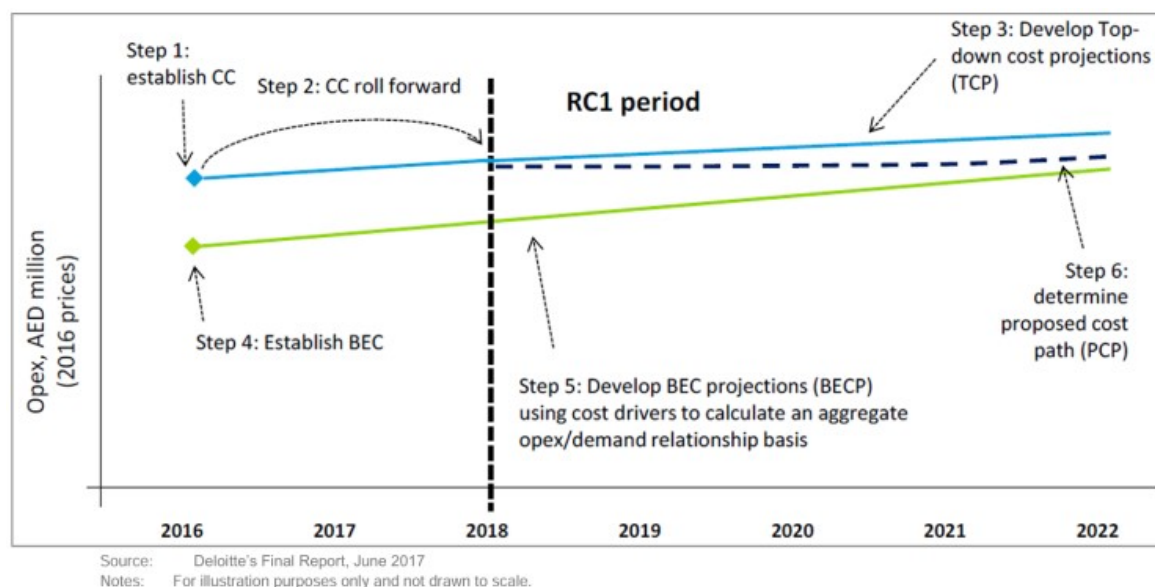


Figure 6 outlines the sequential process: starting with baseline cost estimation, incorporating demand forecasts, adjusting for efficiency, and arriving at a blended control path that reflects both macro trends and company-specific factors.

This structure is further illustrated in Figure 7, which visualises how these projections evolved across companies. It shows the resulting “reasonable cost paths” for RC1: a midpoint between companies’ forecasts and more conservative regulatory assumptions.

**Figure 7: Consultant's approach to RC1 opex projections**



Together, these figures demonstrate how the RC1 methodology introduced greater consistency, transparency, and analytical rigour compared to earlier cycles. While the model remains sensitive to input assumptions (such as demand or inflation), its repeatable structure has helped provide a consistent framework for efficiency-focused regulation in Abu Dhabi's utilities sector.

*“It should be noted that the determination of ‘efficient’ Opex relies on available data and assumptions. Inaccuracies in demand forecasts or cost baselines may affect the accuracy of these projections.”*

## RC1 and RC2: Precision, Conditionality, and Flexibility

The RC1 control (2018–2021) marked a procedural shift toward a more analytical and conditional approach to Opex setting. The Department of Energy adopted a [hybrid](#) approach, combining top-down benchmarking with bottom-up evaluation of company forecasts.

The starting point for RC1 allowances was the companies’ audited 2016 Opex (in 2018 prices), which was then [adjusted](#) to include provisional allowances for specific activities such as Emiratisation, direct staff training, and major developments, as well as savings from operational changes. Certain costs were excluded, such as the Bureau’s licence fees and specific pumping or metering expenses.

Our RC1 opex projections, in 2018 prices, adopted in these final proposals and listed in **Table 2** below are based on our opex consultant’s final report issued in June 2017 (which uses the companies’ 2016 audited opex as the base level instead of 2015 audited opex used in their draft report and our draft proposals). These opex allowances amount to around AED 3.2 billion per year (in 2018 prices) for RC1.

**Table 5: [RC1 Opex Projections - Final Proposals](#)**

AED million, 2018 prices		2018	2019	2020	2021
AADC	Electricity	498	487	472	461
	Water	239	237	233	231
	Total	736	724	706	692
ADDC	Electricity	669	660	653	643
	Water	439	441	443	444
	Total	1,108	1,101	1,096	1,088
TRANSCO	Electricity	384	386	383	380
	Water	374	377	380	384
	Total	757	763	762	764
ADSSC	Total	724	660	650	641
<b>Total</b>		<b>3,325</b>	<b>3,247</b>	<b>3,213</b>	<b>3,184</b>

In RC2 (2023–2026), the [Transformation Allowance](#) mechanism was introduced to manage cost items where the need for the initiative had been identified at a high level, but benefits could not yet be fully demonstrated. These costs were not included in the RC2 baseline Opex allowances. Instead, a [ceiling](#) was set for each company over the control period (totalling AED 2,401 million in 2021 prices across all licensees), as shown in Table 6 below.

**Table 6: Uncertain costs over RC2**

AED million, 2021 prices	2023	2024	2025	2026	Total
AADC	63	86	58	53	260
ADDC	159	219	186	186	750
TRANSCO	66	80	54	58	258
ADSSC	214	207	356	356	1,133
<b>Total</b>	<b>502</b>	<b>592</b>	<b>654</b>	<b>653</b>	<b>2,401</b>

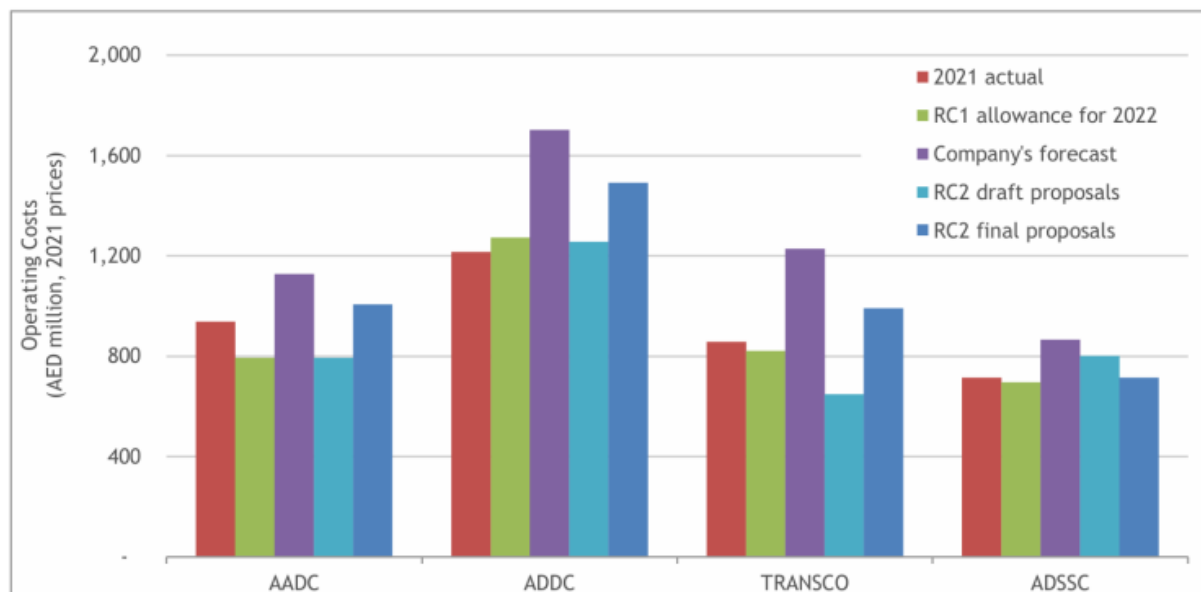
Eligible areas for submission under this mechanism were strictly limited to specific transformation programmes such as certain health initiatives, operational, financial and strategic improvements, promotion of customer satisfaction, among other defined initiatives, as well as certain company-specific costs (e.g., Operational Continuity for ADDC, AMD and O&M for AADC, customer billing and RO polishing plants for ADSSC).

To recover these costs, companies were required to submit detailed proposals to the Department of Energy during RC2, demonstrating expected benefits, customer impact, project plans, milestones, deliverables, key performance indicators, and cost breakdowns. Approval was conditional on meeting these evidentiary requirements, with reimbursement made on an ex-post basis via an annual Opex adjustment.

Although this mechanism provided the regulator with flexibility to approve uncertain initiatives as more evidence became available, it also introduced planning uncertainty for utilities, as recovery of costs depended on securing future approvals.

*“While the framework accommodates uncertainty through mechanisms such as the Transformation Allowance, external events, such as inflation shocks or supply chain disruptions may still lead to deviations from projected operating costs, requiring ad hoc regulatory responses.”*

**Figure 8: RC2 Average Annual Opex Projections - Final Decision Comparison**



As shown in Figure 8, the RC2 final Opex proposals (blue bars) came in below the companies' own forecasts (purple bars) across all four utilities, reinforcing the regulator's focus on disciplined, evidence-based allowances. The graph also illustrates how the RC2 allowances compare with both RC1 values and 2021 actuals, providing context for how the DoE calibrated expectations: higher than the previous control period, but still more conservative than what licensees had projected. This visual comparison underscores the regulator's effort to balance flexibility (via mechanisms like the Transformation Allowance) with a continued emphasis on cost containment and justified need.

By incorporating such mechanisms, RC2 introduced a way to balance the need for ex-ante control with the reality that utilities operate in a changing environment. The approach enabled regulatory flexibility without abandoning the efficiency discipline that underpins consumer protection.

## Company Responses and Regulatory Maturity

Throughout the evolution of Opex regulation, a consistent pattern has emerged: utilities tend to forecast higher operating costs than the regulator ultimately allows. While this gap is often interpreted as a sign of regulatory discipline or company inefficiency, some industry experts argue that it may also point to overly conservative allowances. In practice, essential but hard-to-predict costs such as urgent maintenance or innovation pilots may be excluded from the baseline, potentially leaving companies underfunded in critical areas.



This divergence has led to a tightening of regulatory practices, with the Department of Energy refining its tools for assessing forecasts, identifying outliers, and drawing comparisons across companies. Figures such as Figure 1, Figure 2, and Figure 8 illustrate this dynamic, where company projections often exceed regulatory allowances.

In response, licensees have also been prompted to improve their internal forecasting and cost justification processes. The shift away from historical averages toward evidence-based benchmarking has encouraged utilities to strengthen their data, build clearer business cases, and more rigorously analyse cost drivers.

Conditional elements introduced in RC1 and institutionalised in RC2 have further shaped this dynamic. These mechanisms allow for mid-period engagement and adjustment while maintaining a strong focus on efficiency and accountability.

Moreover, it is worth noting that utilities operate within a broader economic and policy environment. External factors such as inflation shocks, fuel price volatility, or new government mandates can significantly influence Opex, sometimes in ways that are difficult to predict or accommodate within fixed allowances. While the current framework includes some adaptive mechanisms, ongoing vigilance is needed to ensure that regulatory rigidity does not inadvertently penalise otherwise efficient operators facing external pressures.

*“The regulatory approach to Opex remains under development. Future price controls may revise the current methods as new challenges and priorities emerge, such as the integration of decarbonisation targets or changes in digital infrastructure requirements.”*

## **Conclusion: A More Adaptive Model for Opex Control**

Summarily, over the past two decades, Abu Dhabi’s approach to regulating operating expenditure has moved through several distinct phases. It began with simple, historic-cost baselines, then shifted to formula-driven adjustments that imposed explicit efficiency challenges, and later evolved into consultant-led reviews and benchmarking. Most recently, the framework has incorporated conditional allowances that make cost recovery dependent on evidence of value delivered.

A constant feature has been the treatment of X. Unlike other price controls, where X an annual efficiency factor, in Abu Dhabi X has mostly been set to zero. Instead, efficiency challenges were applied directly in the allowance models through annual real cuts, demand scalers, baseline reductions, or conditional mechanisms. The exception is RC1, where small non-zero X factors were applied for electricity businesses, but even here the

intent was to smooth revenues over time rather than to impose ongoing productivity savings.

Table 7 below summarises this progression across successive price controls, showing how the methodology and efficiency assumptions became more structured and demanding over time.

**Table 7: Summary of how each Price Control's Opex methodology changed over time**

Price Control / Regulatory Control	Opex Allowance Methodology	Quantitative Efficiency Challenge Assumption
<b>PC1 (1999-2002)</b>	First controls introduced. Opex allowances were based on historical data, primarily 1997-1998 income statements and company budgets. No benchmarking was applied. Inflation was accounted for using a composite CPI index ( <b>80% UAE, 20% US</b> ); ADWEC used UAE CPI <b>only</b> . A CPI-X formula applied in the licences (with X factor values <b>ranging</b> from 0% to 12% across companies), though X served only for revenue profiling rather than efficiency.	No explicit efficiency assumptions applied.
<b>PC2 (2003-2005)</b>	Based on 2001 reported Opex, rolled forward using <b>UAE CPI</b> . No explicit adjustment was made for demand growth; Opex was held flat at 2001 levels in real terms throughout 2003–2005.	No formal efficiency factor was stated. Since Opex allowances were held <b>constant</b> at 2001 levels in real terms, companies had to absorb all demand growth through efficiency improvements. This was later described retrospectively by the regulator (in PC3 documents) as equivalent to an underlying assumption of about <b>5%</b> in annual real opex efficiency gains.
<b>PC3 (2006-2009)</b>	Based on 2004 reported Opex, restated in 2006 prices using UAE CPI. Adjustments included demand scaling and efficiency factors, plus additional cost allowances for AADC (water installations), ADWEC (new system responsibilities), and TRANSCO (water pumping).	Opex allowed to <b>increase</b> by only 0.75% for each 1% increase in demand. In addition, a 5% per year real efficiency improvement was assumed.
<b>PC4 (2010-2013)</b>	Refinement of the PC3 formula. Base Opex <b>set</b> as the simple average of 2008 actual and 2009 projected Opex, expressed in 2010 prices using UAE CPI. The base was then adjusted for demand and efficiency factors, consistent with the PC3 methodology.	Similar to PC3, Opex was <b>allowed</b> to rise only 0.75% for each 1% demand growth, while also being reduced by 5% annually in real terms.

<p><b>PC5 (2014-2017)</b></p>	<p>Seven-step approach based on the Bureau's consultant's final report (2013). Base year set as 2012 controllable Opex (excluding one-offs and non-controllable costs), rolled forward to 2014. Projections combined:</p> <ul style="list-style-type: none"> <li>• Top-down forecasts using high-level cost-volume relationships and assumed productivity gains.</li> <li>• Bottom-up benchmarks for efficient cost levels with an annual frontier shift.</li> <li>• A transition path requiring companies to close 60% of the gap between their top-down cost projections and bottom-up efficient cost projections by 2018.</li> </ul> <p>Final allowances were expressed in 2014 prices and included certain specific additional costs (e.g. Emiratisation, mega-developments, DSM, pumping).</p>	<p>Efficiency <u>assumptions</u> were explicit and differentiated by company and sector.</p> <ul style="list-style-type: none"> <li>• Demand elasticities: 0.7% Opex increase per 1% demand growth (electricity); 0.85% (water/wastewater).</li> <li>• Annual real efficiency gains: 3% (TRANSCO), 3.5% (ADDC), 4% (AADC &amp; ADSSC).</li> <li>• Frontier shift: annual frontier shifts efficiency assumption of 1% per annum.</li> </ul>
<p><b>RC1 (2018-2021, extended to 2022)</b></p>	<p>Seven-step consultant approach (top-down + bottom-up). Base year set as 2016 audited controllable Opex, rolled forward to 2018. Top-down projections used demand and productivity assumptions; bottom-up benchmarks set efficient costs with an annual frontier shift. A blended cost path (PCP) required partial catch-up to efficiency benchmarks, with no extra non-controllable items added.</p>	<ul style="list-style-type: none"> <li>• Demand scalars: Opex allowed to rise 0.7% (electricity) or 0.85% (water/wastewater) per 1% demand growth.</li> <li>• Annual real efficiency gains of 3-4% per year assumed.</li> <li>• Frontier shift: additional 1% per year in the bottom-up benchmarks.</li> <li>• Catch-up efficiency: companies required to close 45% of the gap between projected and efficient costs by 2021 (15% per year from Year 2 onwards).</li> </ul> <p>These <u>assumptions</u> imposed an explicit and multi-layered efficiency challenge, building on the PC5 framework.</p>

<b>RC2 (2023-2026)</b>	<p>Seven-step consultant-led approach, consistent with RC1, using both top-down and bottom-up benchmarking. Base year set as 2021 audited controllable Opex (excluding non-cash, atypical, and non-controllable items), expressed in 2021 prices and rolled forward to 2023. Top-down cost projections (TCP) developed using aggregate Opex/demand relationships and productivity assumptions, while bottom-up efficient costs (BEC/BECP) were based on cost drivers at the business-unit level. The proposed cost path (PCP) projections required companies to transition toward efficient costs over RC2, with allowances set equal to bottom-up projections where these exceeded top-down levels.</p>	<p>Efficiency challenge embedded on several layers:</p> <ul style="list-style-type: none"> <li>• Annual real efficiency: Assumed productivity improvements</li> <li>• Catch-up efficiency: Companies required to converge toward efficient costs over RC2 via the proposed cost path (PCP).</li> <li>• Additional 0.5% per year efficiency <b>adjustment</b>: Applied across base allowances, reducing total Opex by ~AED 165m (2021 prices) over the RC2 period.</li> </ul>
------------------------	--	--

#### Sources:

- [2002 Price Control Review, Page 17, 19](#)
- [2005 Price Controls, Page 15](#)
- [2002 Price Control Reviews, Page 21](#)
- [2002 Price Control Reviews, Page 8](#)
- [2005 Price Controls Review, Page 18](#)
- [2005 Price Controls Review, Page 7](#)
- [2009 Price Controls Review, Page 5](#)
- [2013 Price Controls Review, Page 37](#)
- [2018 Price Control Review, Page 68](#)
- [RC2 Final Decision, Page 63](#)

The trajectory reflected in the table highlights how Abu Dhabi's Opex regulation has matured into a framework that is both disciplined and adaptive. Each step built on the last: from historic baselines, to formulaic efficiency assumptions, to independent benchmarking, and finally to conditional, performance-linked allowances.

This evolution serves three purposes. First, it keeps consumer tariffs affordable by ensuring companies cannot simply pass rising costs through unchecked. Second, it creates stronger incentives for efficiency by forcing companies to plan, justify, and

deliver cost reductions. And third, it provides a more stable platform for long-term investment, by making allowances more predictable and evidence-based.

At the same time, Opex is only one part of the overall revenue equation. Capital expenditure, the cost of capital, and targeted incentive mechanisms all play equally important roles in shaping the price control framework. In our next articles, we turn to these elements and explore how they interact with Opex to define the balance between efficiency, affordability, and system reliability.




## About the Authors



### PJ McCloskey

Director

 [pj@mcceconomics.co.uk](mailto:pj@mcceconomics.co.uk)

 [+\(971\) 58 588 7584](tel:+(971)585887584)



### Rodrigo Remor

Consultant

 [rodrigo@mcceconomics.co.uk](mailto:rodrigo@mcceconomics.co.uk)

 [+\(39\) 342 832 3977](tel:+(39)3428323977)

#### Offices & Locations

Kemp House, 160 City Road London, EC1V 2NX, United Kingdom  
Al Sarab Tower, Abu Dhabi Global Market, UAE  
Office 901-2, Apricot Tower, Silicon Oasis, Dubai

#### Incorporation

UAE & UK

#### Registration details

UAE licence number 47005411

#### Web address

[www.mcceconomics.co.uk](http://www.mcceconomics.co.uk)

#### General email

[tenders@mcceconomics.co.uk](mailto:tenders@mcceconomics.co.uk)