

## **PUBLIC VERSION**

# **EMC's NEMS Budget for the Financial Year Ending 30 June 2024**

## BUDGET FOR FY2023/24

### 1. INTRODUCTION

FY2023/24 marks the start of the new revenue regulatory regime for the period from 1 July 2023 to 30 June 2028 which was approved by the regulator on 30 June 2023. EMC is allowed to recover the cost of operating and administering the Singapore Wholesale Electricity Market (SWEM) through its allowed revenue.

Faced with an evolving energy landscape, EMC will be working closely with the regulator and the industry to support Singapore’s decarbonisation efforts as well as to introduce safeguards to strengthen the resiliency of the energy market. EMC will also continue to invest in the necessary technology to enhance its operational efficiency and system resiliency to provide the market with a satisfactory level of service while preserving the financial integrity and governance structure of the market. Lastly EMC will continue to invest in staff development and engagement and manage its key personnel dependency risk.

### 2. NEMS ACTUAL AND BUDGET ASSUMPTIONS

#### 2.1 Revenue

EMC is allowed to charge fixed and variable fees under the revenue regulatory regime.

The following categories of fixed fees remain unchanged since it was implemented on 1 July 2018:

- a) Annual market participant fee of \$10,000 per market participant
- b) One-off market participant registration fee of \$5,000 per registration
- c) RSA hardware token fee (from 6<sup>th</sup> token onwards per MP) of \$350 per token

The variable fee is calculated as follows:

$$\frac{\text{EMC's Allowed Revenue – Projected Revenue from Fixed Fees}}{\text{Forecast Traded Volume}}$$

The price cap on the variable fee for the period covered in this paper is as follows:

Price Cap (Cents/MWh)	Actual (Unaudited) FY2022/23	Budget FY2023/24
1 July to 30 June	35.89	37.03

Under the new regime, an annual adjustment is made to the price cap for exogenous costs and any deviation between the projected and actual revenue collected from fixed and variable fees.

#### 2.2 Manpower Costs

The attrition rates rose sharply from 4% in the previous two years to 19% in FY21/22 and 11% to date. The significant increase is a result of increased competition in the labour market and had impacted even critical lead roles that had left EMC for better paying roles. With the competition expected to sustain especially with growth in the renewable energy and sustainability market, it

is critical to cater for the necessary manpower budget to prevent further talent drain and be able to attract new talents. The manpower budget is aligned with the compensation philosophy and market benchmarking reviewed with Mercer. FY2023/24 approved permanent headcount supporting NEMS increased by 1 to 74. The additional headcount was for the conversion of an existing contract application security role responsible for managing compliance with NEMS cybersecurity.

To recognise manpower resources utilised towards the development of capital projects, the practice of capitalising manpower costs will continue.

In line with Condition 3 of the Electricity Licence for Market Company, EMC shall maintain separate accounts for its authorised business. NEMS manpower supporting allowed activities are charged out from the NEMS accounts.

### **2.3 Depreciation and Amortisation**

All fixed assets are depreciated over three years except for IT servers which are depreciated over five years. Leasehold renovations are depreciated over the life of the lease.

In line with the new accounting standards for leases, the cost of the right-to-use asset is recognised as an asset at the commencement of the lease and the depreciation charge for the right-of-use asset is reflected in the profit and loss statement.

### **2.4 Other Operating Expenses**

Other operating costs (i.e. excluding manpower, depreciation, technology, market operator licence fees and office rental costs) are generally assumed to increase at an average of 2% year-on-year which is close to the average historical MAS Core Inflation.

### **2.5 Taxes**

Capital allowances are assumed to be fully claimed on all IT capital expenditure in the year of its incurrence and over three years for office renovation and equipment.

### **2.6 Business Development**

Business development costs will be accounted for separately from NEMS activities and do not form part of the NEMS revenue determination.

### **2.7 Capital Expenditure**

Capital expenditure (CAPEX) is based on regulatory requirements, system replacements and upgrades recommended by IT. Detailed breakdown of the capital expenditure and project justifications is provided in Section 4.

### **2.8 Gearing & Share Capital**

It is assumed that EMC will not take on loans and there will not be any change in share capital.

## 2.9 Dividend

Dividend declarations each year will be subject to the directors' consideration of reasonableness and prudence.

## 3. NEMS BUDGET FOR FY2023/24

### 3.1 Summary

FY2022/23 actual net operating profit for NEMS of \$9,231K is better than budgeted by \$1,443K. This is predominantly due to higher exogenous claims for NEMSCAP and licence fees, partially offset by higher manpower cost and licence fees.

Higher manpower cost and IT services cost, partially offset by higher NEMS fees contributed to the \$3,139K decrease in budgeted net operating profit for FY2023/24 compared to FY2022/23 actual net operating profit.

### 3.2 NEMS Revenue and Expenses

Description	FY23/24 Budget S\$'000	FY22/23	
		Actual (Unaudited) S\$'000	Budget S\$'000
NEMS Fees <sup>1</sup>	42,520	37,513	37,046
Exogenous Item	-	4,156	2,452
Other Income	-	3	-
Market Data Subscription	275	456	352
<b>Total NEMS revenue</b>	<b>42,796</b>	<b>42,128</b>	<b>39,851</b>
Manpower	13,605	12,913	12,466
Other Operating Expenses	23,099	19,984	19,597
<b>Total NEMS Operating Expenses</b>	<b>36,704</b>	<b>32,897</b>	<b>32,063</b>
<b>NEMS Operating Profit (before tax)</b>	<b>6,092</b>	<b>9,231</b>	<b>7,788</b>

Note 1: NEMS fees comprise both fixed and variable fees.

### 3.2.1 Actual FY2022/23 (Unaudited) vs. Budget FY2022/23

#### 3.2.1.1 Revenue

FY2022/23 actual revenue is \$2,277K above FY2022/23 budget mainly due to higher exogenous claims for NEMSCAP and licence fees.

#### 3.2.1.2 Salaries & Related Costs

FY2022/23 actual is higher than FY2022/23 budget due to higher bonus provision.

### 3.2.1.3 Other Operating Expenses

FY2022/23 actual is \$387K higher than FY2022/23 budget mainly due to the following:

- Higher market operator licence fees imposed by the regulator (\$444K);
- Higher depreciation (\$161K) mainly due to unplanned security projects implemented to meet regulatory requirements;
- Higher IT services cost (\$472K) mainly contributed by corporate website implementation cost which was not capitalised; partially offset by
- Lower legal cost and professional fees (\$292K), recruitment cost (\$74K) and utilities (\$157K).

### 3.2.2 Budget FY2023/24 vs Actual FY2022/23 (Unaudited)

#### 3.2.2.1 Revenue

NEMS revenue increased by \$667K mainly due to the higher variable fees in line with the higher price cap.

#### 3.2.2.2 Detailed Expenses

Description	FY23/24	FY22/23	Variance		FY22/23
	Budget S\$'000	Actual (Unaudited) S\$'000	S\$'000	%	Budget S\$'000
Salaries and employment benefits	13,605	12,913	691	5.4%	12,466
Depreciation of plant and equipment	6,978	6,796	182	2.7%	6,634
Market Operator licence fee	4,171	4,089	82	2.0%	3,645
IT service costs	8,161	5,805	2,356	40.6%	5,333
Office Maintenance, Rental & Utilities	1,688	1,518	170	11.2%	1,675
Legal and professional fees	540	409	131	32.1%	701
Directors' fees	175	175	-	0.0%	175
Audit fees	333	326	7	2.1%	327
Communications & PR	261	347	(85)	(24.6%)	303
Insurance expenses	178	159	19	12.2%	170
Panel fees and expenses	335	268	68	25.3%	312
Other operating expenses	278	93	184	197.4%	322
<b>Total NEMS expenses</b>	<b>36,704</b>	<b>32,897</b>	<b>3,806</b>	<b>11.6%</b>	<b>32,063</b>

### 3.2.2.3 Manpower Costs

The FY2023/24 budgeted headcount by departments is as follows:

Headcount	FY23/24 Budget	FY22/23 Actual	FY22/23 Budget
CEO Office	1	2	3
Corporate Services	11	11	10
Market Administration	7	7	7
Information Technology	22	20	21
Information Security	5	5	5
Market Operations	18	17	18
Market Assessment Unit	6	6	5
Communications	2	2	2
Human Resources	2	2	2
<b>Total</b>	<b>74</b>	<b>72</b>	<b>73</b>

### 3.2.2.4 Manpower costs are broken down as follows:

Manpower Costs	FY23/24 Budget S\$'000	FY22/23 Actual (Unaudited) S\$'000	Variance (FY23/24 Budget vs FY22/23 Actual)		FY FY22/23 Budget S\$'000	Variance (FY FY22/23 Actual vs FY22/23 Budget)	
			S\$'000	%		S\$'000	%
Salaries and 13 <sup>th</sup> Month	9,990	8,463	1,527	18.0%	8,508	(44)	(0.5%)
Performance Bonus	2,588	3,221	(634)	(19.7%)	2,663	558	21.0%
Central Provident Fund	1,085	979	105	10.8%	1,158	(179)	(15.4%)
Training	259	256	3	1.1%	220	36	16.6%
Staff welfare	229	213	16	7.7%	170	43	25.0%
Other manpower costs	673	797	(124)	(15.6%)	815	(18)	(2.2%)
Manpower Cost Capitalised/charge out	(1,219)	(1,016)	(203)	20.0%	(1,068)	52	(4.8%)
<b>Total Manpower Costs</b>	<b>13,605</b>	<b>12,913</b>	<b>691</b>	<b>5.4%</b>	<b>12,466</b>	<b>447</b>	<b>3.6%</b>

#### Salaries

An overall salary increases of 13% is budgeted for FY2023/24 after taking into account promotions and salary adjustments in line with market benchmark. There was also 1 additional headcount factored in FY2023/24 as approved by EMA under the new regulatory framework. In addition, lower salary costs arising from manpower gaps due to attrition in FY2022/23 also contributed to the budget variance.

Towards July 2023, Management will consider the current market conditions and propose the actual 2023 salary increment percentage for approval.

### Performance Bonus

The performance bonus policy is based on both company and individual staff performance. For FY2023/24, the performance bonus for the year is proposed at \$2.6 million.

### Other Manpower Cost

Other manpower costs in FY2023/24 are expected to be lower than FY2022/23 actual mainly due to lower contract staff cost, partially offset by higher leave provision and medical insurance.

### Manpower Cost Capitalisation/Charge Out

Budgeted costs for FY2023/24 are higher than the FY2022/23 actual mainly due to resources supporting more capital projects in FY2023/24 and lower allocation of resources to projects in FY2023/24 as consulting projects planned did not materialise.

### **3.2.2.5 Depreciation & Amortisation**

Depreciation in FY2023/24 increased by \$182K over the FY2022/23 actual mainly due to the full year depreciation impact of capital assets purchased in the prior year.

### **3.2.2.6 IT Service Costs**

The total budget of IT Service Costs comprises the following:

	FY23/24 Budget \$'000	FY22/23 Actual (Unaudited) \$'000	Purpose
<b>Internal IT Opex</b>			
Internal Corporate System and Applications Maintenance	580	436	Support and maintain the corporate IT systems and applications.
<b>Subtotal</b>	<b>580</b>	<b>436</b>	
<b>NEMS Infrastructure Opex</b>			
Data Backup Services	10	8	Maintain timely backup of NEMS and corporate data to be stored offsite for purpose of data recovery base on business' needs
NEMS Network and Server Maintenance	1,117	575	Support and maintain the 24x7 critical NEMS network and server infrastructure.
NEMS System Maintenance	1,233	878	Support and maintain the 24x7 critical NEMS systems

	FY23/24 Budget \$'000	FY22/23 Actual (Unaudited) \$'000	Purpose
Managed Security Services Subscription	1,942	1,020	Subscribe to Managed Security Services to provide 24x7 IT security protection and 24x7 proactive security monitoring, alerts and remediation against IT security threats, for both NEMS and corporate systems
Monitoring Systems Maintenance	100	75	Maintain a 24x7 real time system monitoring systems for the NEMS and corporate services, and be able to proactively provide alerts to the IT teams for prompt resumption of normal business operations
Teleco Lease Lines - Subscription and Maintenance	201	163	Subscribe and maintain telecommunications lease lines for connectivity with the external network and Internet
Data Centres Facilities Maintenance	139	150	Maintain a secured and highly available data centres to house the NEMS and corporate systems.
<b>Subtotal</b>	<b>4,742</b>	<b>2,870</b>	
<b>NEMS Software / Application Opex</b>			
NEMS Software/Application maintenance	2,522	2,258	Support and maintenance on tools and 3 <sup>rd</sup> party software (database software, middleware software and solver software)
<b>Subtotal</b>	<b>2,522</b>	<b>2,258</b>	
<b>IT Security</b>			
IT Security	317	242	Implementation of Web Proxy Web Isolation features and advanced network security monitoring tools, additional vulnerability assessment and penetration tests.
<b>Subtotal</b>	<b>317</b>	<b>242</b>	
<b>Total</b>	<b>8,161</b>	<b>5,805</b>	

The overall FY2023/24 IT Service cost budget is higher than the FY2022/23 actual by \$2,356K (40.6%). The key factors contributing to the variance are:

- Increase in Internal IT OPEX by \$144K mainly due change in licencing for O365 to subscription model and licence fee for expense claims automation.
- Increase in NEMS Infrastructure maintenance by \$1,872K mainly due to increased scope of managed security services (\$922K), new projects such as NEMS secured website revamp (\$181K), Information Technology System Management (ITSM) refresh (\$307K) and hosting and maintenance for corporate website revamp (\$315K).



- Increase in Application System maintenance by \$264K due to NEMS secure website revamp, hosting and maintenance for corporate website revamp, new market clearing engine (MCE) solver subscription cost, market modelling licence fees, partially offset by corporate website implementation cost expensed in FY2022/23.

### **3.2.2.7 Office Maintenance/ Rental & Utilities**

The budget for FY2023/24 is \$170K higher than the FY2022/23 actual mainly due to higher utilities cost for data centres.

### **3.2.2.8 Legal and Professional Fees**

The budgeted legal and professional fees in FY2023/24 are \$131K higher than FY2022/23 actual mainly to cater for legal services relating to market rules changes.

### **3.2.2.9 Communications & Public Relations (PR)**

The Communications & PR budget for FY2023/24 is lower than FY2022/23 actual as the Golf Day event will not be carried out in FY2023/24.

### **3.2.2.10 Insurance Expenses**

EMC continues to prudently maintain insurance coverage for Professional Indemnity, Directors' and Officers' Liability, Industrial All Risks, Commercial General Liability and Cybersecurity insurance. Higher insurance premiums were budgeted for FY2023/24 as compared to FY2022/23 actual to cater for volatility in Cybersecurity insurance.

### **3.2.2.11 Panel Fees & Expenses**

The FY2023/24 budgeted Panel Fees & Expenses is \$68K higher than FY2022/23 actual due to an upward revision in the hourly rates paid to the panel members in the new regime as well as professional fees for the review of the Econometric model to reflect the new market developments.

### **3.2.2.12 Other operating expenses**

Other operating expenses for FY2023/24 are higher than the FY2022/23 actual due to higher meeting and travelling expenses with the easing of community and border restrictions and higher recruitment cost.

#### 4. NEMS CAPITAL EXPENDITURE

EMC’s capital expenditure plans are as follows:

	Note	FY 23/24 Budget \$'000	FY 22/23 Actual (Unaudited) \$'000
Furniture Fittings, Equipment & Office Renovation	4.1	30	120
Internal (Corporate) and NEMS Systems	4.2	6,360	7,400
Provision for Rules Change Panel (RCP) Requests	4.3	-	417
EMA Directed Projects	4.3	-	157
<b>Total</b>		<b>6,390</b>	<b>8,094</b>

##### 4.1 Furniture Fittings, Equipment and Office Renovation

The budget for FY2023/24 is mainly for the replacement of office equipment and fixtures and fittings.

##### 4.2 Internal (Corporate) and NEMS Systems

In planning the list of Technology projects, EMC’s key foci are:

- (a) Resiliency and Reliability  
Improve resiliency of NEMS architecture and infrastructure to ensure no single point of failure. Periodic refresh of system (beyond useful hardware life) to prevent technology obsolescence and ensure supported versions of hardware and software are used;
- (b) Extensibility and Flexibility  
Ensure scalability of system for capacity growth and ability to support new market initiatives and capabilities;
- (c) Governance, Compliance and Security  
Implement controls and enhance IT Service Management toolsets to ensure governance and compliance. Enhance overall security posture and improve proactive security monitoring, detection, and protection capabilities to respond rapidly to security threats and vulnerabilities; and
- (d) Customer Satisfaction  
Enhance market participants’ NEMS user experience and delivering more value-added services. Digitisation of manual processes and implement automation to improve market participants’ interaction with the secure trading portal and ensure operations efficiency.

The following sections provide a breakdown of the capital initiatives for FY2023/24:

**Internal (Corporate) and NEMS Systems Capital Expenditure Budget**

Projects	Note	FY 23/24 \$'000
Internal (Corporate) IT Systems	4.2.1	295
NEMS Systems	4.2.2 to 4.2.3	6,065
<b>Total</b>		<b>6,360</b>

**4.2.1 Internal (Corporate) IT Systems**

FY2023/24 Internal IT Systems CAPEX budget is for the replacement and upgrade of ageing end user computing devices and peripherals, replacement of ageing virtualisation server hardware and upgrade and purchase of software licenses.

**4.2.2 NEMS Application Systems**

The budget for FY2023/24 is for NEMS Website revamp, market modelling and NEMS application enhancements.

**4.2.3 NEMS IT Infrastructure and IT Operation Systems**

FY2023/24 CAPEX budget for NEMS IT Infrastructure and IT Operation Systems is for the upgrade of ageing NEMS infrastructure equipment and services comprising of Application Program Interface (API) Gateway hardware and software, network, servers, storage and ancillary support to fulfil stipulated NEMS availability requirements, as well as security related projects.

## Appendix 1

### EMC's Obligations with Respect to Rules and Market Licence in Preparation of Budgets

Requirements	Action to be taken by
<p>Market Rules Chapter 2 sections 10.1.1.1 and 10.1.1.2</p> <p>No less than 100 days prior to the beginning of each fiscal year EMC is:</p> <p>To submit proposed expenditure and revenue requirements and a schedule of fees for the following fiscal year to the RCP for review; and</p> <p>Publish notice of its proposed expenditure and revenue and schedule of fees</p>	<p>22 March 2023</p>
<p>Market Rules Chapter 2 section 10.1.4</p> <p>The RCP shall submit a written report to the EMC Board indicating the views of the RCP and a summary of any material submissions from interested persons pursuant to Chapter 2 section 10.1.1.2</p> <p>Market Rules Chapter 2 Section 10.1.5</p> <p>The RCP report shall be submitted to the EMC Board no later than 75 days before the beginning of the new fiscal year</p>	<p>14 April 2023</p>
<p>Market Rules Chapter 2 section 11.1.1</p> <p>EMC shall no less than 60 days prior to the beginning of the fiscal year to submit to the EMA for the approval its proposed expenditure and revenue requirements and either:</p> <p>a schedule of fees or</p> <p>a statement of fee methodology</p>	<p>28 April 2023</p>
<p>Market Licence Condition 18</p> <p>"The Licensee shall, no less than 60 days before the beginning of the Licensee's fiscal year, submit to the Authority the Licensees proposed expenditure and revenue requirements for the following fiscal year to the Authority for review and approval ... in the manner and to the extent ... in the manner and to the extent, if any, required by the market rules."</p>	<p>28 April 2023</p>

## Appendix 2

### EMC's cost : Breakdown by services

Services	FY 23/24 Budget	FY 22/23 Actual (Unaudited)
	Fee \$'000	Fee \$'000
Systems	21,733	19,260
Pricing and information	3,266	2,983
Settlement/Ancillary Services	2,553	2,153
Market assessment	1,867	1,853
Rule change process	2,788	2,291
Market Licence	4,171	4,089
Panel Fees	325	268
<b>Total</b>	<b>36,704</b>	<b>32,897</b>
<b>Individual fees to Market Participants</b>	Est. fee (\$)	Est. fee (\$)
Common services (all those listed above)	<b>37.03 cents</b>	<b>35.89 cents</b>
Impact assessed on Market Participant and Market Support Services Licensees as a class EMC fee / average actual YTD May 2023 USEP	0.13%	0.13%
Average actual July 2022 to May 2023 USEP	\$287	\$287