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POWER & WATER PROCUREMENT

OMAN ELECTRICITY MARKET
ANNUAL REPORT
2024

HIS MAJESTY

SULTAN HAITHAM BIN TARIK

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Disclaimer:

The Oman Electricity Market Annual Report 2024 is intended to provide an overview of the Oman Electricity Market (Market) activities and performance during the year 2024 (Market Annual Report). It does not form part of the Market Rules, nor does it create any rights or obligations related to the Market Rules. This Annual Report shall not substitute the provisions of the Market Rules.

The Market Annual Report should be read in conjunction with the Market Rules and any person that is a Party or seeks to become a Party to the Market Rules must refer to the Market Rules and the Law for the Regulation and Privatisation of the Electricity and Related Water Sector to understand their obligations and provisions.

Capitalised terms used in the Market Annual Report 2024 shall have the same meaning as set in the Market Rules.

Where there are any discrepancies between the Market Annual Report and the Market Rules, the provisions of the Market Rules shall prevail. Also, in the case of discrepancies between the Market Annual Report and any published data on the Oman electricity market website, the provisions of the website data shall prevail.

Oman Electricity Market Annual Report 2024 is prepared based on version 4.0 of the Market Rules.

Timing Conventions:

The Market Rules uses the following main timing conventions (Section I.5 of Market Rules Document):

- Trading Period: means a period of 30 minutes commencing on the hour or half-hour.
- Trading Day: means a period of 24 hours commencing at [00:00] on any day.
- Time Zone: Gulf Standard Time (GST) which is UTC + 4:00
- Gate Closure: means for any Trading Day d is at [10:00] on the day prior to the Trading Day.
- Ex-Ante: means the period after Gate Closure but before the start of the Trading Day.
- Ex-Post: means the period after the end of the Trading Day.

Glossary

Term	Meaning
Authority	Authority for Public Services Regulation
MWh	Megawatt Hour
TWh	Terawatt Hour
OMR	Omani Rial
P(W)PA	Power and (Water) Purchase Agreement
PWP	Oman Power & Water Procurement Company
LDC	Load Dispatch Center
MAC	Market Advisory Committee
MMS	Market Management System
MO	Market Operator
OEM	Oman Electricity Market
SP	Scarcity Price
SMP	System Marginal Price
OCGT	Open Cycle Gas Turbine
CCGT	Closed Cycle Gas Turbine
PSU	Pool Scheduling Unit
TP	Trading Period

1.0 CEO FORWARD

The Oman Electricity Market has continued to demonstrate strong performance and compliance, reaching a significant milestone in 2024. This achievement marks the third year of successful operations since its go-live achievement in January 2022.

The Market Operator function within PWP has managed daily market activities efficiently, ensuring smooth operations. This year, the Market has strengthened its role in building trust and confidence, providing a strong foundation to support the ongoing development of Oman's electricity sector liberalization journey.

In addition, the Market has continued to enhance the efficiency of availability signals, optimize dispatch processes, and improve transparency, all while encouraging greater operational incentives. Looking ahead, the Market is well-positioned to further integrate renewable energy sources and demand-side resources.

The Market also ensures greater transparency for generators, particularly providing opportunities for expiring P(W)PAs and providing clarity for operational decision-making. The market results and data have been successfully published on the website, providing essential information to sector companies and potential future stakeholders.

In 2024, the market successfully incorporated the registration of the new Non-Pool Based Power Contracts: ALRUSAIL1, MANAH, and MANAH2 (Solar Plant). These generation facilities have successfully completed all registration processes and commenced participation in the Pool in compliance with Market Rules.

The Market has shown impressive performance in 2024, benefiting from the continued growth of Oman's local economy. The market peak demand for electricity increased by 6.6% compared to the previous year, reflecting the nation's expanding energy needs. The total Pool demand increased as well. Additionally, the average SMP in 2024 increased by 8.3% from 2023, reaching 9.1 OMR/MWh, highlighting the continued reliance on efficient CCGT Pool Scheduling Units to meet the majority of demand. However, it is important to note that the scarcity prices witnessed a rise in 2024, driven by the higher Pool Demand and prolonged unavailability of some of the generation facilities units.

As the year progressed, market participants enhanced their operational capabilities, gaining valuable experience that has allowed them to better navigate the market's requirements. The information available to participants, investors, and consumers has also expanded, providing more transparency and clarity. Furthermore, the Market Scheduling Software, which received third-party certification, continues to demonstrate its advanced capabilities, ensuring precise scheduling and settlement outcomes. This certification strengthens the confidence of both current and future participants in the market's integrity and efficiency. Moreover, the MMS has achieved availability of 100% throughout the year.

In 2024, all the market participants are still Non-Pool Based Power Contracted. However, the Market has remained a driving force in fostering competition within Oman's energy sector. By promoting real-time operational efficiency, the Market encourages generators to lower their costs and make well-informed decisions to optimize future performance.

The leadership team at PWP is dedicated to advancing the Market's development, tackling new challenges, and maximizing the benefits of the ongoing transition.

2.0 MARKET BRIEF

This annual report provides a summary of the implementation of the Market Rules and the operation of the Pool in 2024. The Market witnessed strong growth in demand, with an increase of 7.4% in total Pool Demand compared to the previous year. This surge in demand was accompanied by notable growth of the local economy. The Yearly average SMP increased, primarily due to increase in Pool Demand, Economic Gas Price and other non-fuel cost components.

In 2024, three additional generation facilities —ALRUSAIL1, MANAH2, and MANAH— joined the market as Non-Pool Based Power Contracted entities. In 2024, SUR1 made the largest contribution to generation. Renewable energy sources, including solar contributed 4.4% of the total electricity generated in the spot market, an increase of 2.33% from the previous year due to introducing MANAH2 solar.

Four MAC meetings were held in 2024. Two Market Rules Modification Proposals were received and approved. These modifications resulted in the publication of Market Rules V4.1, effective from January 1, 2025. Additionally, the Market Audit for the period of January 1 to December 31, 2024, was conducted by Robinson Bowmaker Paul (RBP). The audit has concluded that "nothing has come to our attention that causes us to believe that the Market Operator has not been compliant with the Market Rules, Market Procedures and Approved Methodologies during the Audit Year, in all material respects"

Additionally, a Communication Failure Default was issued for three different generators during the year. No Settlement Queries were referred to as Settlement Disputes during 2024. In 2024, the Market Operator's operating expenses totaled OMR 1.8 million, including indirect expenses, depreciation and amortization, and in common cost allocation.

2.1 KEY FACTS AND FIGURES

This section offers key highlights regarding the market scheduling and settlement outcomes, including:

- **Yearly average SMP: 9.120 OMR/MWh.** This year Average SMP is higher than 2023 by 8.3% due to increase in Pool Demand, non-availability of most efficient power units, Economic Gas Price and other non-fuel cost components.
- **Yearly average Scarcity Price: 4.022 OMR/MWh.** The increase in Scarcity Price during 2024 was triggered by tightness in System Margin.

- **Total Pool Demand in the Year: 38.97 TWh**. The total Pool Demand has risen by 7.4% compared to 2023, mainly driven by the growth of the local economy and weather.
- **Average Pool Demand per Trading Period for the Year is 2218.159 MWh.** The average Pool Demand has increased by 7.3% compared to 2023.
- **Maximum Pool Demand reached in a Trading Period in the Year is 3521.366 MWh.** The highest Pool Demand was recorded on 25th June.
- **Renewable energy utilization in Oman Electricity Market Pool is 4.4%.** The contribution from renewable energy plants witnessed an increase. Additional to IBRI2, on October 28, 2024, Manah2 Solar plant (MANAH2) officially entered the market with a registered capacity of 500 MW.
- **Average System Available Capacity per Trading Period for the Year is 3431.230 MWh.** The steam turbine in one of the largest CCGT plants was unavailable from the beginning of the year until early July. Furthermore, from September to December, an entire Production Block in another major CCGT plant was out of service.
- **Maximum System Available Capacity reached in a Trading Period in the Year is 4279.329 MWh.** System Available Capacity is the total Actual Availability of all Production Blocks at any Trading Period. In 2024, ALRUSAIL1, MANAH1 and MANAH2 joined the Market, hence contributed in increasing the Available Capacity.
- **Average System Margin per Trading Period in the Year is 1255.556 MWh.** The System Margin experienced fluctuations throughout the year due to several factors, including units' outages.

The tables below present a market history comparison of the results for 2022, 2023, and 2024.

Price (OMR/MWh)	2022	2023	2024
Yearly Average SMP	8.100	8.418	9.120
Yearly Average Scarcity Price	0.841[1]	2.313	4.022

Load (MWh)	2022	2023	2024
Average Pool Demand per Trading Period	1781.290	2067.040	2218.159
Maximum Pool Demand reached in a TP	3,195.400	3301.668	3521.366

[1] Note that the Eligible Availability for all Production Units is based on their Output as no unit is certified. This is the reason behind the low Scarcity Price.

2.2 MARKET BENEFITS AND ACHIEVEMENT

The electricity spot market remains a crucial component in Oman's transition to a wholesale electricity market. The development of the electricity spot market aims to achieve multiple objectives within the sector. Over the course of its development and operation, the following benefits have been observed:

- **Base for future market liberalization;**

  Functioning wholesale market would support / expedite liberalization activities of Oman electricity sector. Currently the market plays an important role in the sector liberalization initiatives including: development of competitive wholesale retail market, Direct Sale, distribution & supply liberalization, renewables penetration, integration of Green Hydrogen, etc.

- **Improve dispatch efficiency:**

  Increasing transparency and highlighting situation where the dispatch of generators diverges from an unconstrained optimal dispatch. This will result in more efficient dispatch and consequently reducing the consumption of fuel for power generation, reducing the variable operation and maintenance cost and improving network utilization. Market will offer detailed records and visibility to out of merit dispatch for every half an hour of operation.

- **Enhance residual values and transparency of the treatment of expiring P(W)PAs:**

  Market will further clarify post contract revenue opportunities by providing greater transparency for the treatment of expiring P(W)PAs. The existing contract will have greater clarity for treatment of expired PWPs.

  Moreover, this will contribute in lowering the prices offered by Generator during the development of new capacities.

- **Provide a vehicle for uncontracted and unconventional capacity:**

  This including back-up GTs, demand response, renewable, generation facility which cannot participate in PWPs regular project development tenders to meeting demand and operating reserve requirements and would provide flexibility for new entrants to develop the most efficient new plant.

- **Real time operation:** The market would incentivize Generators to operate in response to real time system needs as opposed to only meeting contractual responsibilities, resulting in more efficient asset utilisation.
- **Improve Availability signals:** decrease forced outage rates overall or during critical peak periods which will eventually enable Oman to maintain the same level of reliability with a lower reserve margin.
- **More efficient operation incentives:** relaxing operating constraints (such as minimum run and minimum down times). Improve response to market signals and adjust operation.
- **Greater flexibility offered to potential new IPP developers:** the IPP could, for example, decide to make provision for a significantly larger eventual plant size than is needed to meet the contract obligations, knowing that there will be a market outlet available for the plant's additional output.

3.0

MARKET OVERVIEW

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3.1 OMAN ELECTRICITY SPOT MARKET

Oman Power and Water Procurement Company SAOC (PWP) has developed a wholesale electricity spot market to enhance the efficiency, transparency, and operation of the country's electricity sector. This initiative allows diverse generation sources, including those that do not typically participate in PWP's normal Power and Water Purchase Agreement (P(W)PA) tender process, to engage in the market. It also enables the continued participation of existing generation plants whose P(W)PAs have expired.

The geographical scope of the spot market covers the Main Interconnected System (MIS) in Oman, while excluding the Dhofar power grid, Musandam. The market operates on a wholesale level, where generators can sell electricity, and PWP, acting as the Power Procurer (PP), is the sole purchaser. It is important to note that the retail market reforms, which allow consumers to select their electricity suppliers, are outside the scope of this development.

3.2 INDUSTRY STRUCTURE

The Parties to the Market Rules have signed a Framework Agreement as per the Market Rules requirements. In order for other Generators to participate in the Pool, they must become a Party to the Market Rules by registering its Production Facility and signing the Accession Agreement according to Market Rules.

All Generators in the Main Interconnected System of the Sultanate of Oman are required to become a Party to the Market Rules and the arrangements therein (the Pool).

The Parties to the Market Rules are:

- The Generators;
- PWP in its capacity as a Power Procurer;
- PWP in its capacity as a Market Operator; and
- Oman Electricity Transmission Company in its capacity as a Transmission Company.

The Authority is not a Party to the Market Rules but is assigned certain functions under the Market Rules as prescribed under the Sector Law.

Any decisions rendered by the Authority in relation to the Market Rules are issued in accordance with the Authority's regulatory authority under the Sector Law and are therefore binding in nature. The legal architecture of the market is shown in figure 1 below.

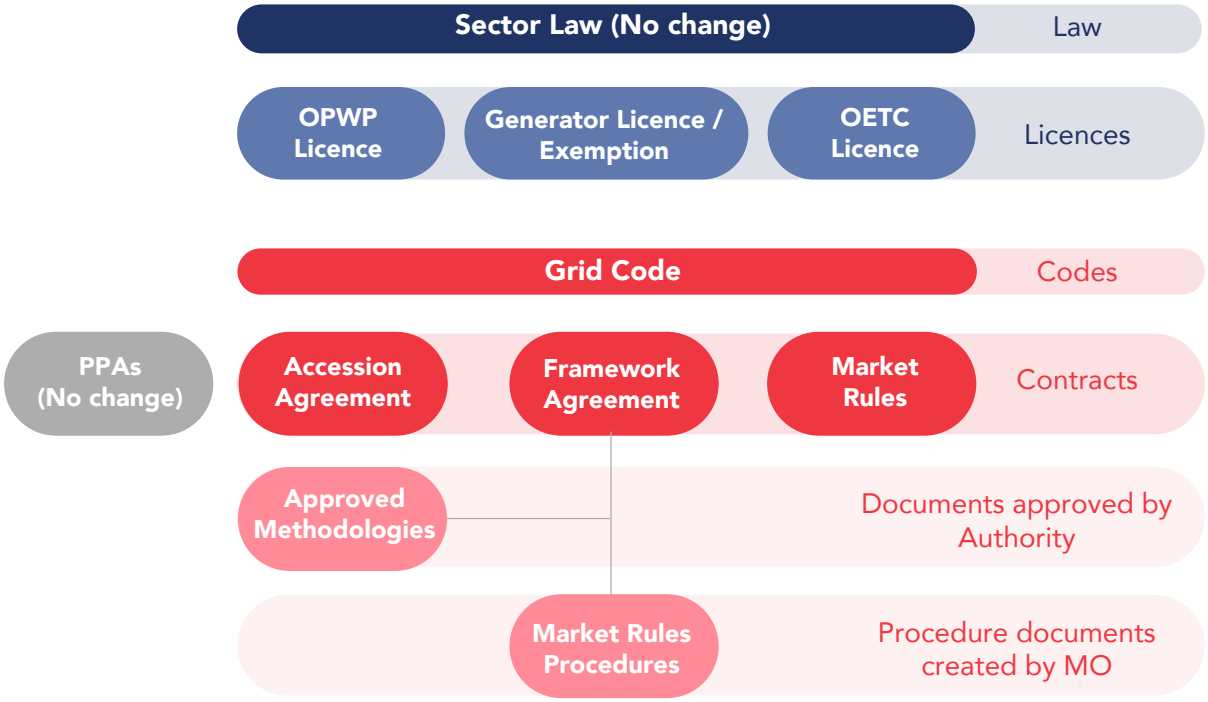

Figure 1: Market Legal Architecture

3.3 MARKET OPERATION

The Market processes occur in a daily cycle, with Generator offers submitted a day ahead. An Ex-Ante Market Schedule is produced by the Market Operator a day ahead, then Load Dispatch Centre (LDC) operated by the Transmission Company manages scheduling and dispatch of the Generators. The Market Rules do not include these LDC processes, which will continue to be governed by the Grid Code. There will be information flows including forecasts and generation schedules between the Market Operator and LDC. Final prices are calculated as Ex-Post step, with a single published energy price for each Trading Period within the day, based on the price of the marginal Generator.

Settlement occurs monthly where Market settlement amounts will be calculated for all Generators, but it is important to note that the actual Settlement for Generators with current P(W)PAs will be settled as per their PPA payment terms not via Market settlement payments. These Generators will continue to be settled under the terms of their relevant P(W)PAs, with the same P(W)PA prices and conditions, not under Market prices. Generators without P(W)PA will be paid based on Market prices. In the future there is potential for Generators with expired P(W)PA to be settled partially under the spot market as Pool-Based Power Contract.

PWP acting as the Power Procurer will be the sole purchaser in the Market. This is in addition to managing Market offers for contracted demand side management resources and is also responsible for export/import demand adjustments for MIS interconnection.

The Market design uses "complex" Generator offers, with No Load Costs, and technical characteristics of the plant such as ramp-rates and minimum on and off times. Offers may also consider CCGT configuration, and transitions between operating configurations. Offers are submitted once a day, in the morning of the day ahead of the Trading Day. In exceptional circumstances with a very controlled process (e.g. fuel supply outage) a Generator can only update its offer after Gate Closure. Generators will be required to submit offers that reflect their short run marginal costs, which for Generators with P(W)PAs will consist of prices consistent with their Offer Derivation From Contract Terms Approach document agreed with Power Procurer. Non-dispatchable Generators (e.g. solar and wind generation facilities) will register as price-taker plant and submit a forecast of their output. The Market Operator will use all of the available offers, from Generators with and without P(W)PAs, to form the Market Schedule and prices. Then, the Market Schedule will be passed to LDC for their consideration for dispatch instruction.

Along with energy payments, Generators may receive a Scarcity payment. This payment is based on a defined amount of money allocated across the Trading Periods, reflecting the reserve margin (higher payments for the Trading Periods where the system experienced tight supply-demand margines). The scarcity payment which is not paid out during the year (Total Unrealised Scarcity Value) may be available at end of year reconciliation.

3.4 MARKET OPERATOR COSTS AND SUPPORTING COMMENTARY

PWP has two distinct roles in the Oman Electricity Market: Market Operator and Power Procurer's role. The Market Operator's part is as a service provider, administering the Market Rules and providing the platform for trading. The purchase of power under the Market Rules would remain the responsibility of PWP in its Power Procurer role. There is regulatory "ring-fencing" between the two roles via the PWP license and the Market Rules. PWP has implemented the ring-fencing requirements to effectively separate the Market Operator from Power Procurer's.

The Market Operator costs are related to administering and operating the Market. There will be no power purchases or sales under the Market Operator as it does not take title to or pay for power under the Market Rules. Instead, the purchase of electricity under the Market will remain with the existing part of PWP, the Power Procurer.

The Market Operator has dedicated staff and separate IT systems for operating the Market. The board, the chief executive officer, human resource and support services, finance, legal and regulatory compliance, and other functions of PWP support the Market Operator.

The Market Operator business has invested about RO 4.8 million in developing and implementing the Market Management System (MMS).

The Market Operator operating costs largely comprise staffing costs, training and travel expenses, internet and hosting services, third-party consultancy services, maintenance of the IT systems, depreciation of MMS, furniture, equipment, and a share of allocation of the overall Power Procurer's operating costs.

During 2024, the Market Operator incurred operating expenses of OMR 1.8 million which includes direct operating expenses of OMR 0.6 million, depreciation and amortization OMR 1 million and common cost allocation of OMR 0.2 million.

3.5 MARKET MANAGEMENT SYSTEM (MMS) TECHNICAL OVERVIEW

During 2024, significant efforts were made to enhance the Market Management System (MMS) with the deployment of a few patches and one major release addressing critical defects requested by the Market Operator. The MMS availability was 100% according to the Service Level Agreement (SLA) calculations.

Furthermore, the Business Continuity Plan has been finalized where different scenarios are listed with the activities that should be performed to overcome the challenge and continue the operation of the Market.

It is worth mentioning that the delegated authorities' document of the Market Operator was approved in December 2024. It helps in the segregation of duties, which is crucial for internal audits and compliance. Also, it ensures that the Market Operator can maintain the highest standards of operational excellence by clearly defining the delegated authorities.

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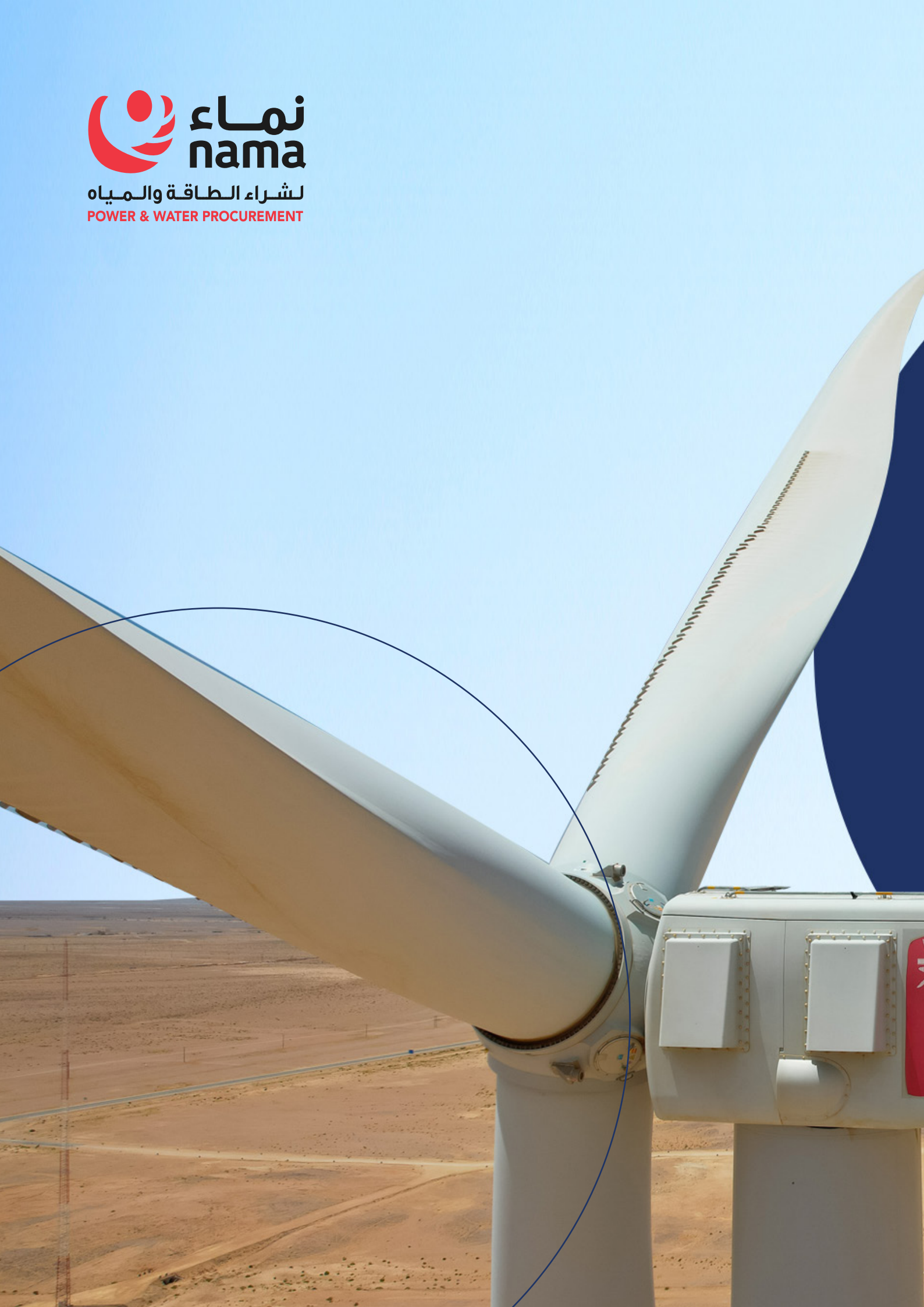
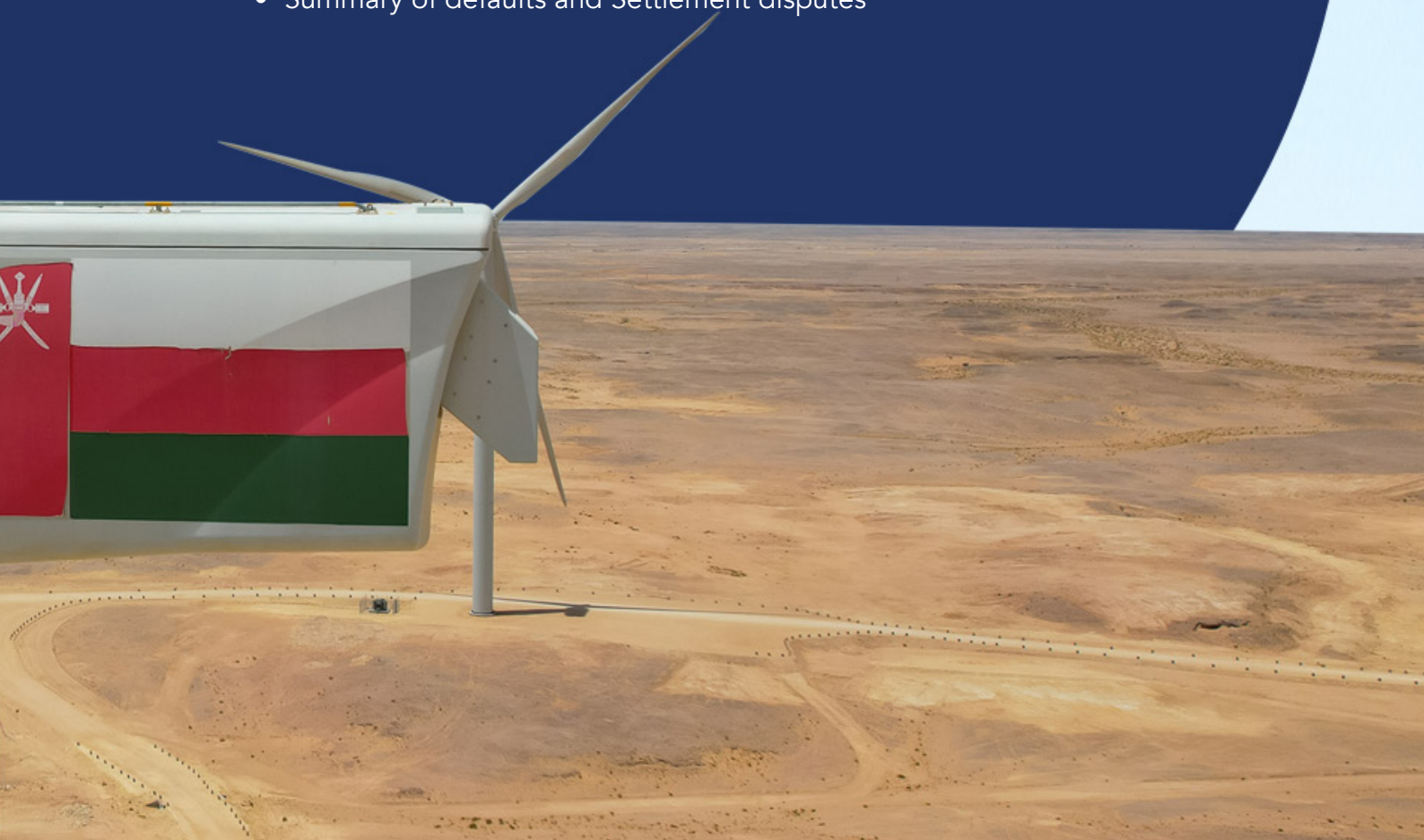


4.0

MARKET GOVERNANCE

This section will outline the specifics of market governance, including:

- Market Advisory Committee (MAC)
- Modification Proposals
- Market Audit
- Market rules Approved Methodologies
- Decisions made by the Authority
- Summary of defaults and Settlement disputes



4.1 MARKET ADVISORY COMMITTEE (MAC)

The Market Advisory Committee (MAC) was initially established in the first quarter of 2022 in accordance with Market Rules Section C.5. Upon the conclusion of its inaugural two-year term, a newly constituted MAC was established in the first quarter of 2024. This newly appointed committee will serve a three-year term, continuing to fulfill its role and provide valuable contributions to the Market.

Specifically, the MAC aims to:

- Act (through a sub-committee established) as Dispute Review Committee in connection with a Settlement Dispute.
- Provide such advice or opinions as the Market Operator may (in its discretion) request in connection with any decision or action which the Market Operator proposes to take in accordance with the Market Rules.
- Co-ordinating the efficient consideration and discussion by Parties and any Prospective Parties of each Modification Proposal to facilitate the development and processing of that Modification Proposal.
- Assessing Modification Proposals and their impact on the Market Rules.
- Co-ordinating the efficient processing of Modification Proposals with proposed modifications of other industry documents (including the Grid Code), or with modifications of the Sector Law proposed by the Government and requesting that Modification Proposals are made by the Market Operator in order to reflect any changes that have been or are so proposed to be made to those documents.
- If requested, advising on whether Modification Proposal received are or are not compliant with the requirements of the Market Rules for Modification Proposals or are tenuous;
- Consulting on Modification Proposals as required.
- Compiling reports on Modification Proposals for the Market Operator.
- Recommending any changes that may need to be made to the Grid Code following Modification Proposals.
- Identifying any related or consequential changes to the Market Rules Procedures (or any other procedures agreed in accordance with these Market Rules) which do not in themselves constitute Modifications that should be considered in respect of any Modification Proposal.

The new MAC members for the period of 2024-2027 are:

Name	Representation
Mr. Talal Al Mahrouqi	MO Chair of MAC
Ms. Jehad Alghufaili	MAC Secretariat
Mr. Awf Al-Mamari	Authority
Mr. Sultan Al Rawahi	Transmission Company
Mr. Nasser Al-Qassabi	Power Procurer
Mr. Yousuf Al - Waili	Generators
Mr. Justin Ian Humphrey	Generators
Mr. Yaarub Al Naabi	Generators

The process of selecting new MAC members for the 2024–2027 term commenced and concluded in the fourth quarter of 2023. In accordance with the Market Rules, Generators were provided with the opportunity to elect their three representatives. Final approval for the selected members was obtained from the Authority, and the new committee members were officially announced at the beginning of 2024.

During 2024, four MAC meetings have been conducted as per the following dates:

1. March 26, 2024
2. June 24, 2024
3. September 11, 2024
4. November 26, 2024

4.2 MODIFICATION PROPOSALS IN 2024

During 2024, two Market Rules Modifications Proposals were received:

1. MRMP-1: The Modification Proposal of the typos in the Market Rules V4.
2. MRMP-2: The Modification Proposal of the Timeline in the Market Rules V4.

All the Modifications were approved and published, and a new version of Market Rules (V4.1) was released with an effective date of January 01,2025.

4.3 MARKET AUDIT

The Market Audit assesses the implementation of the Market Rules. The Oman Power and Water Procurement Company (PWP) has engaged Robinson Bowmaker Paul (RBP) to conduct the Market Audit of the Oman Electricity Market in accordance with Section C of the Market Rules for the Audit Year from 1 January 2023 to 31 December 2023. The same Auditor also conducted the Market Audit for the year 2024, covering the period from 1 January 2024 to 31 December 2024.

All findings from the prior audit year have been successfully addressed and remediated by the Market Operator, resulting in no open findings from the previous audit. The audit has concluded, as reported by the Auditor, that "nothing has come to our attention that causes us to believe that the Market Operator has not been compliant with the Market Rules, Market Procedures and Approved Methodologies during the Audit Year, in all material respects". However, the audit revealed 13 compliance-related findings, representing a decrease from the number identified in the 2023 audit. Furthermore, the Market Operator has made progress in addressing some of the findings from the current year, either by completing or initiating corrective actions. The auditor recognizes and acknowledges the Market Operator's proactive efforts in addressing these findings.

4.4 MARKET RULES APPROVED METHODOLOGIES

In 2024, two Approved Methodologies were updated in response to recommendations derived from the 2023 Audit Findings. The following methodologies were revised:

1. Reserve Holding Adjustment Methodology with an Effective Date: August 29, 2024.
2. Forecast Pool Demand Methodology with an Effective Date: August 29, 2024.

4.5 DECISIONS MADE BY THE AUTHORITY IN THE YEAR

- Determined the Annual Market Parameter Values for the year 2025.
- The Nomination members for Market Advisory committee for 2024-2025.
- Approval for a derogation for Manah Plant in relation to energy delivery and 30 minutes reading.
- Approval for extending the Economic Fuel Price Methodology temporary derogation.
- Market Advisory Committee Authorization Letter.
- Approval of the proposed revision to Reserve Holding Adjustment Methodology and the Forecast Pool Demand Methodology.
- Approval of the Market Rules Modification Proposal.
- Approval of the Market Separation Requirement amendments.
- Approval of the Market Advisory Committee (MAC) appointment, Removal and Replacement Procedure.

4.6 SUMMEAY OF DEFAULTS

1. Ad- Dhahirah Generating Company SAOC experienced a Communication Failure Default due to its failure to submit the Ex-Post Meter Data for the period from October 2 to 10, 2024. Consequently, the Market Operator issued a Rectification Notice on November 10, 2024.
2. Shinas Generating Company SAOC experienced a Communication Failure Default due to its failure to submit the Ex-Post Meter Data for the period from October 7 to 13, 2024. Consequently, the Market Operator issued a Rectification Notice on November 12, 2024.
3. SMN Barka Power Company SAOC experienced a Communication Failure Default due to its failure to submit the Ex-Post Meter Data for the period from December 21 to 23, 2024. Consequently, the Market Operator issued a Rectification Notice on December 26, 2024.

4.7 SUMMARY OF SETTLEMENT DISPUTES

No Settlement Queries were referred to as Settlement Disputes during 2024.

5.0

MARKET PERFORMANCE & POOL PARTICIPANTS

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5.1 POOL PARTICIPANTS

The following table provides the details of participants in the Pool.

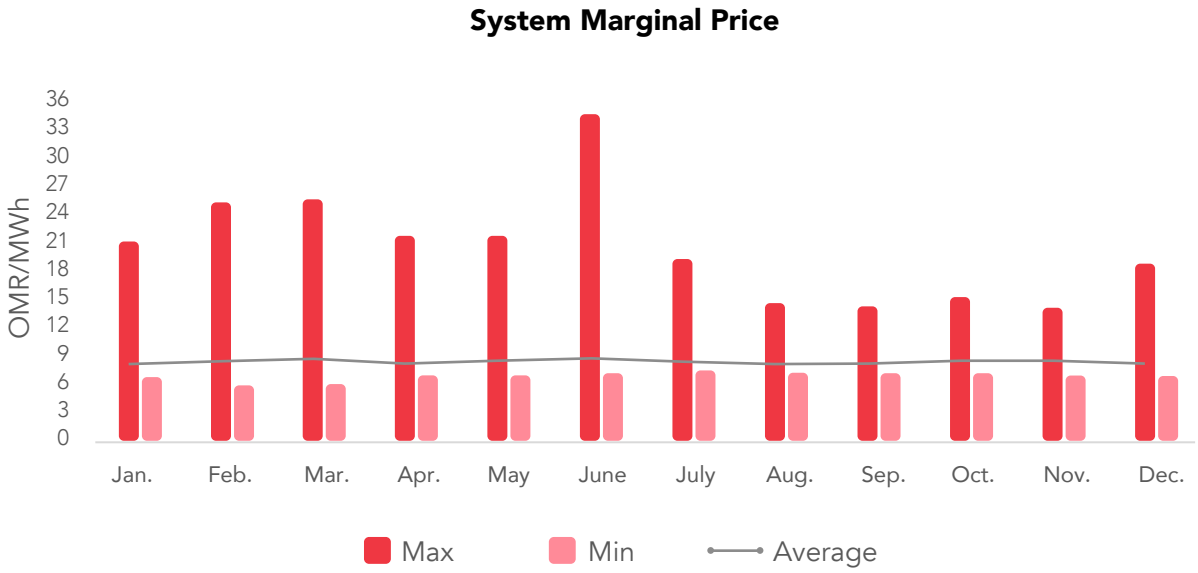
Project / Market Party Name	Project / Company Name	Role in MR	Registered Capacity* (MW)	Registration	WITHDRAWAL
				Effective Date	Effective Date
Barka II	SMN Barka Power Company SAOC	Generator	708.97	01/01/2022	
Barka III	Al Suwadi Power Company SAOC	Generator	736.53	01/01/2022	
Sohar II	Al Batinah Power Company SAOC	Generator	736.53	01/01/2022	
Sohar III	Shinas Generating Company SAOC	Generator	1710.00	01/01/2022	
Ibri1	Ad- Dhahirah Generating Company SAOC	Generator	1509.00	01/01/2022	
Ibri2	Shams Ad Dhahira Generating Company SAOC	Generator	500.00	01/01/2022	
Sur1	Phoenix Power Company SAOC	Generator	1981.80	07/06/2022	
ALRUSAIL1	Al Rusail Power Company SOAC	Generator	184.60	19/08/2024	
MANAH2	Sembcorp Jinko Shine Company SAOC	Generator	500.00	28/10/2024	
MANAH	Manah Power Company LLC	Generator	253.83	04/11/2024	

5.2 OVERVIEW OF THE YEAR

By the end of 2024 the Registered Capacity in the Market was 8821,23 increased by approximately 11.93% from 2023 to 2024. Total energy generated in the Market was 38.97 TWh, out of this around 4.4% was renewable energy specifically solar photovoltaic power. As of the 31st December 2024, there were ten (10) Generators registered in the Market.

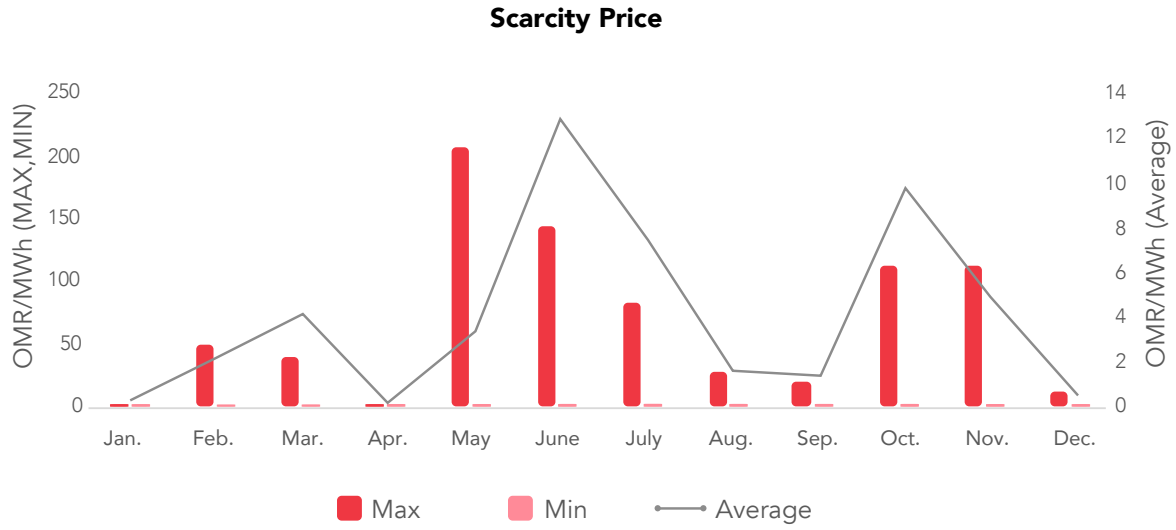
***** Note: This is the registered capacity at reference conditions, as reported by Generator, at the time of Registration

5.3 SYSTEM MARGINAL PRICE



- SMP is calculated in each Trading Period to reflect the cost of the marginal MWh required to meet Pool Demand in a Trading Period within the context of an unconstrained schedule.
- Average monthly SMP is almost constant throughout the year around 9.12 OMR/MWh which is an indication that demand is mostly met by the high efficient CCGT Pool Scheduling Units, low prices in Price Quantity pairs. This year Average SMP is higher than 2023 by 8.3% due to increase in demand, Economic Gas Price and other Non Fuel price components.
- Maximum SMP observed on June, March, February, April and January respectfully. The increase in June is attributed to the high demand and may be the forced outage of high efficient PSU too. The increase during winter months is attributed to the planned outage during winter period (October to April).

5.4 SCARCITY PRICE

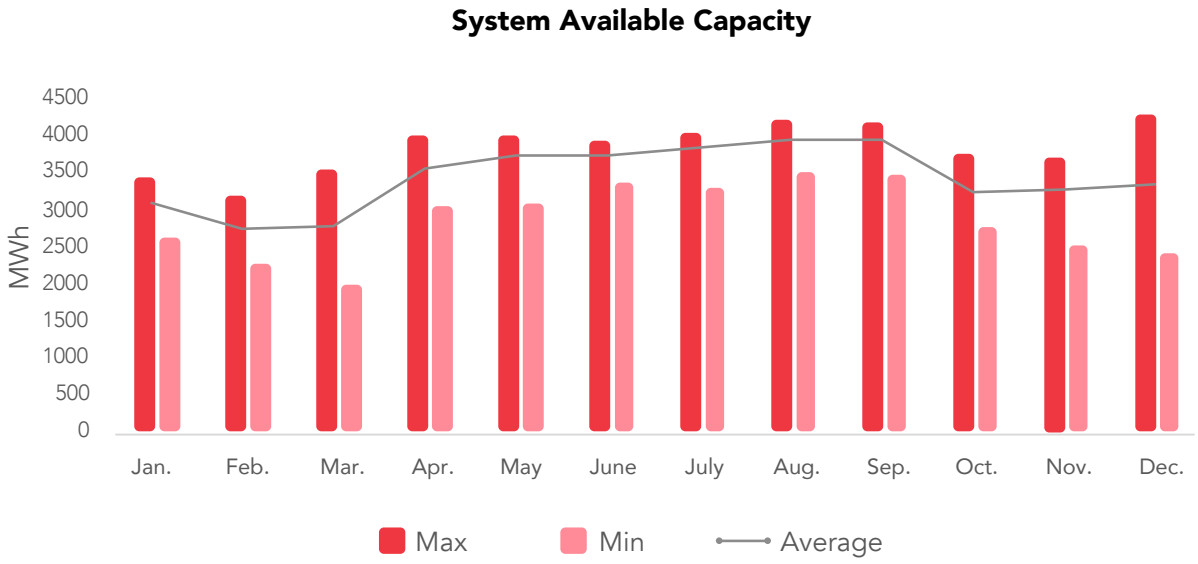


Scarcity Price payments are made based on Availability of Certified PSUs and Metered Quantity for non-Certified one. The mechanism is intended to provide the highest Scarcity Charges to available PSUs at periods with tightest margin between available capacity and the System Capacity Requirement, to value the supply of capacity appropriately and incentivize Availability.

The Scarcity Price provides a spot value for capacity in each Trading Period expressed in OMR/MWh. The Scarcity Price is derived based on Reliability Price, Annual Scarcity Credit Cap and Scarcity Factor Table. Nevertheless, all these parameters are published in the Market website in yearly basis.

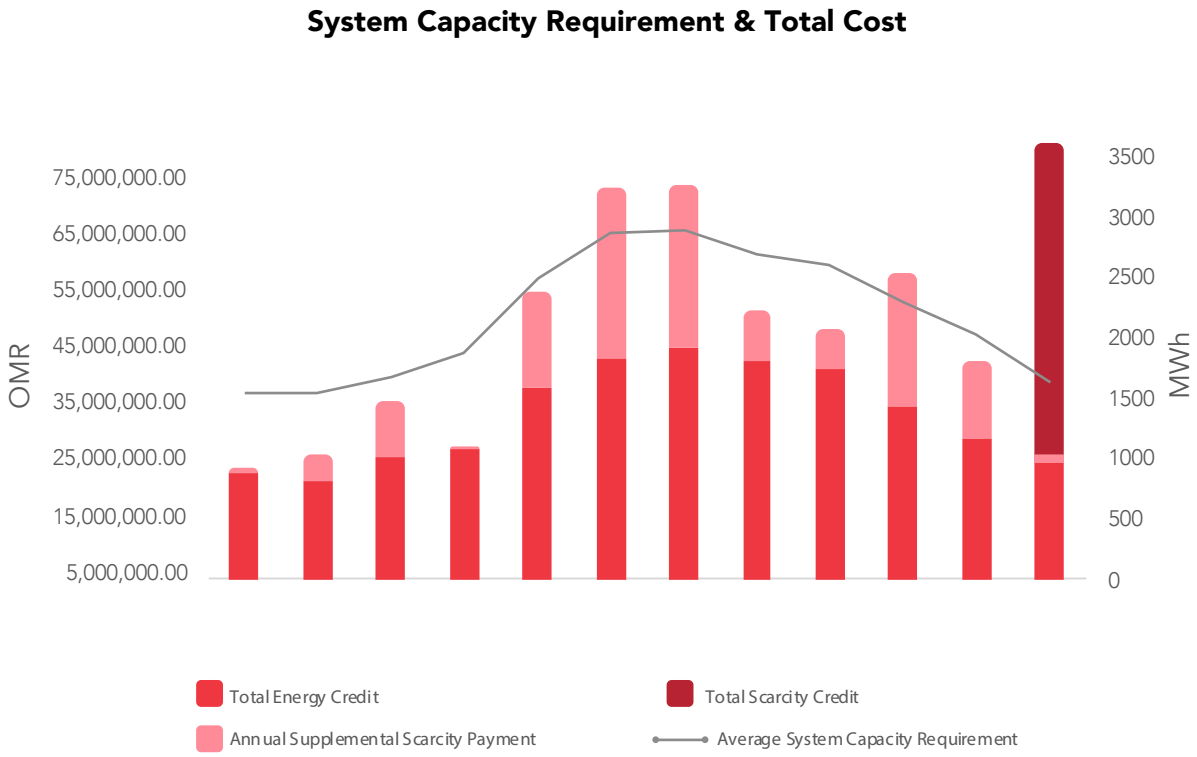
- All Generators have their Availability certification as per the Availability Certification Methodology, allowing them to receive the full Scarcity payments.
- The spikes in May, June, October, and November are within expected ranges due to the summer peak and for annual Production. Facilities maintenance during October and November.
- The higher average Scarcity Price in June triggered by tightness in System Margin and the outages that occurred during the month.
- The maximum Scarcity Price in May 2024 is due to a forced outage of a large CCGT power plant during peak demand in the day. In regard to October and November, forced outages occurred during planned outages causing the high maximum Scarcity pricing.

5.5 SYSTEM AVAILABLE CAPACITY



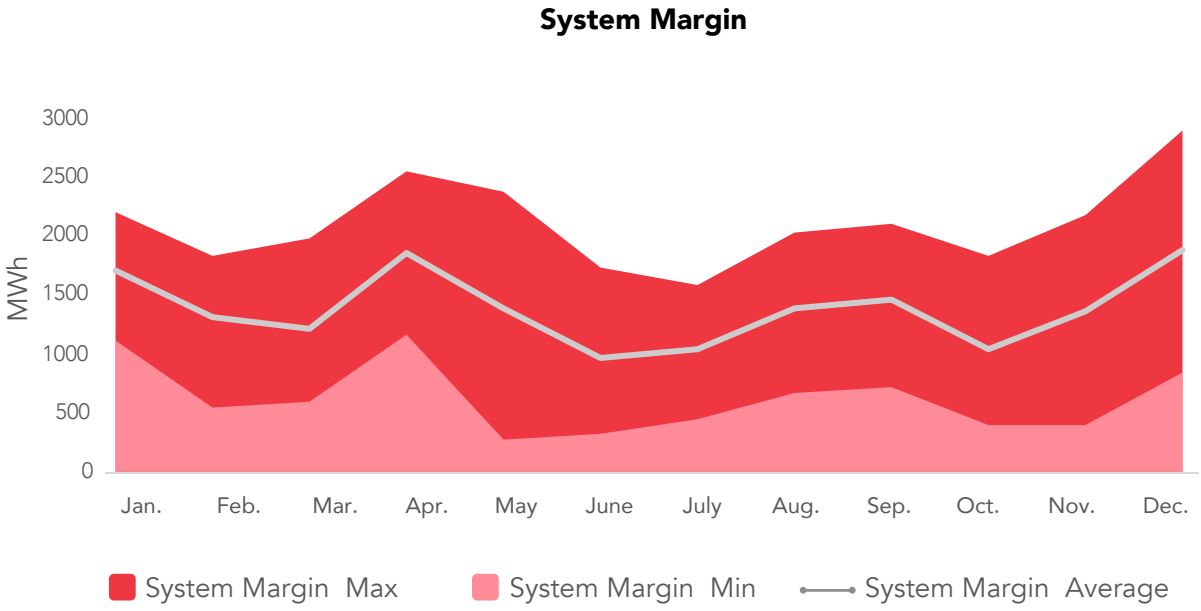
- System available capacity is the total Actual Availability of all Production Blocks at any Trading Period.
- A minor decrease in system available capacity can be observed in January, February, March, October, November, and December due to Production Facility annual maintenance. Annual maintenance is done in the cold months, winter period, as expected demand is lower than the rest of the year.
- The steam turbine in one of the largest CCGT plants was unavailable from the beginning of the year until early July. Furthermore, from September to December, an entire Production Block in another major CCGT plant was out of service. This has reduced the system available capacity, decreasing the reserve margin and consequently increasing the Scarcity Price.

5.6 SYSTEM CAPACITY REQUIREMENT & TOTAL COST



- System Capacity Requirement is the amount of energy that is required to meet the System demand excluding the System Export.
- The System Capacity Requirement increase during the summer months as expected.
- After ALRUSAIL1 and MANAH joined the Market, the Scarcity Credit has increased.
- The large jump in Scarcity Credit during the second half of the year is due to tighter supply and demand during summer months and Planned outages from October until the end of the year.
- In October and November, the Monthly Credit Cap exceeded the Scarcity Credit Cap.

5.7 SYSTEM MARGIN



- The System margin is the proportion by which the total expected available generation exceeds the maximum expected level of electricity demand at each Trading Period, (i.e., total system availability minus Pool Demand). This margin is important to cater for occasional unexpected losses of power or surges in demand. The system margin also used in the calculation of the Scarcity Price, the tighter the system margin is, the higher the Scarcity Price is exponentially.

- Compared to the previous year, the System Margin experienced fluctuations throughout the year due to several factors, including a complete Production Block outage at a CCGT plant from end of September to December, as well as the unavailability of the steam turbine at another CCGT plant from the start of the year until early July.

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6.0 GENERATION MIX

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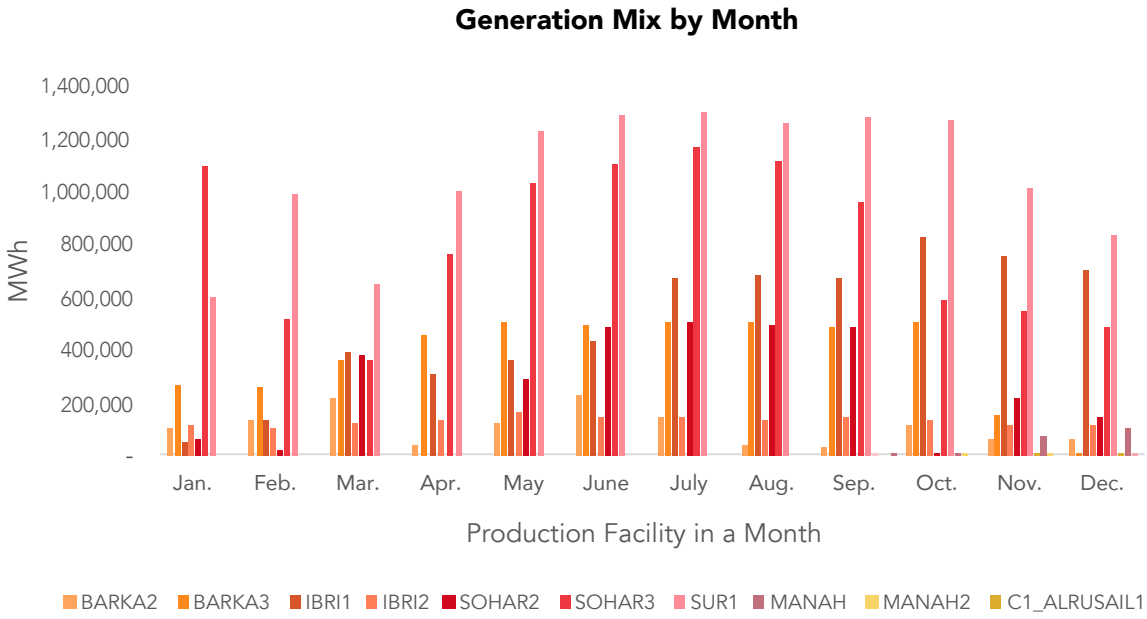
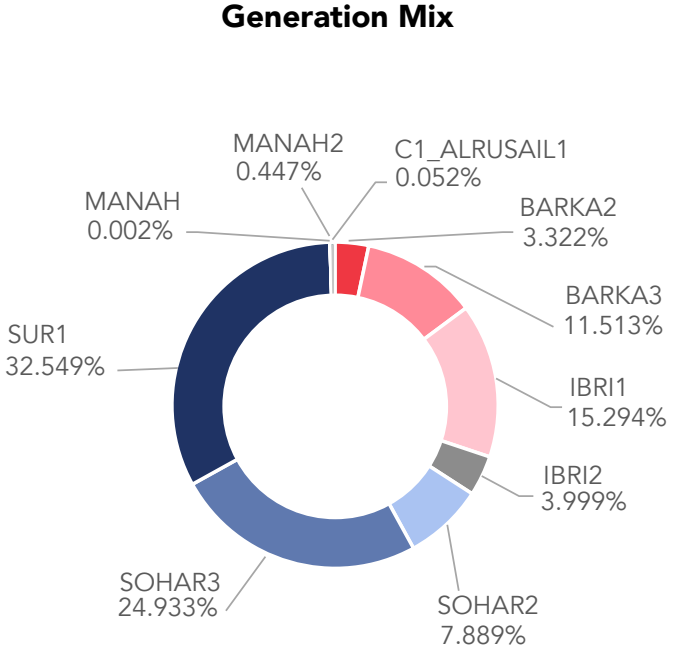


All production facilities in the Oman Electricity Market are conventional gas fired plants (OCGT and CCGT) except for IBRI2 Solar and MANAH2 Solar.



- The Generation share represents the Market Schedule Quantities and not the actual power units generation.
- In 2024, ALRUSAIL1, MANAH2, and MANAH are new registered power generation facilities.
- In 2024, the contribution from renewable energy plants witnessed an increase. The share of the IBRI2 solar plant remained nearly the same as the previous year. On October 28, 2024, Manah2 Solar plant (MANAH2) officially entered the market with a registered capacity of 500 MW.
- SUR1 made the largest contribution to generation of 2024.
- SOHAR3 had a decrease in share compared to last year. SOHAR2 had less share for 2024 compared to last year.
- As expected, the most efficient Production Facilities with best technical and commercial offer parameters get the highest share.

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