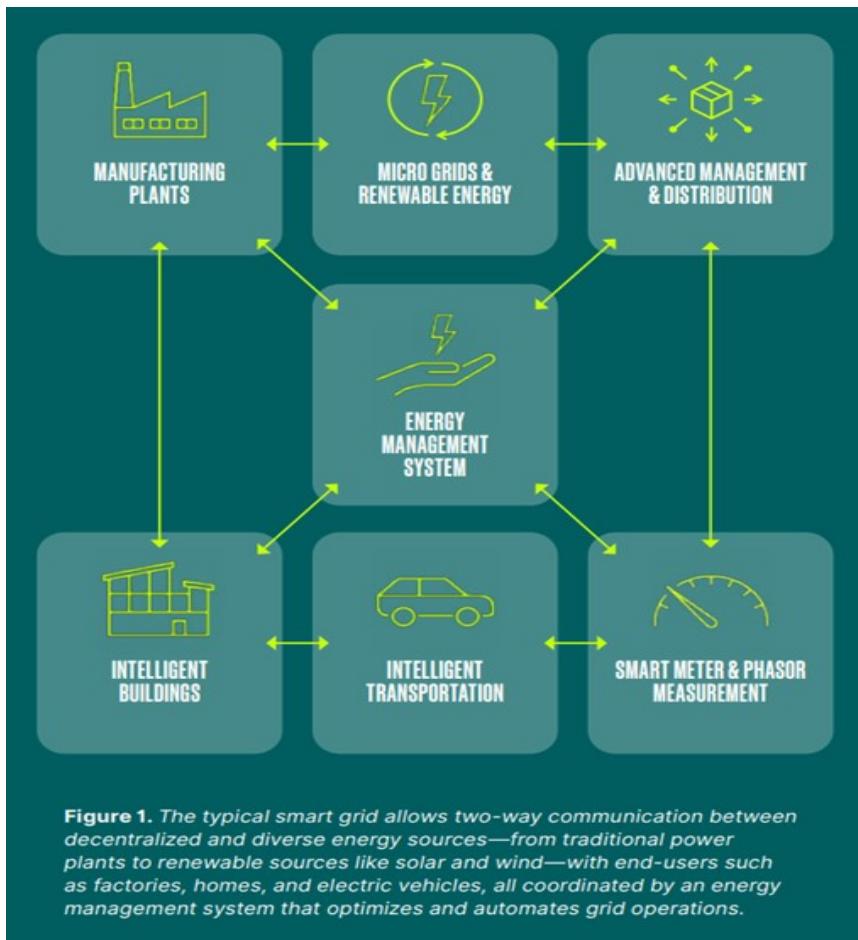


Has Dubai achieved 2% losses and 0.94 Customer Minutes Lost on its electricity grids? And 4.5% losses on its water network?

Dubai Electricity and Water Authority (DEWA) is spearheading the digital transformation of energy distribution through the implementation of smart grids. This initiative aims to enhance efficiency, reliability, and sustainability in energy management.



Investment and Strategic Initiatives

Smart Grid Program: DEWA has committed **AED 7 billion (approximately \$1.9 billion)** to its Smart Grid Strategy spanning from 2014 to 2035. This investment underscores DEWA's dedication to integrating advanced technologies across its infrastructure.

[Arabian Post](#)



Dubai Electricity and Water Authority (DEWA) has unveiled plans to invest AED 7 billion (\$1.9 billion) in a comprehensive smart grid project, aiming for completion by 2035. This initiative is designed to enhance the efficiency, reliability, and sustainability of Dubai's electricity and water services.

Advanced Metering Infrastructure (AMI): By the end of Q1 2023, DEWA had deployed **1,129,816 smart electricity meters** and **1,010,924 smart water meters**, totaling over **2.14 million smart meters** across Dubai. [Utilities Middle East](#)

Impact and Achievements

Operational Efficiency: In 2023, DEWA report a reduction in electricity transmission and distribution losses to 2.0%, a figure significantly lower than the 6–7% typically observed in Europe and the USA. [DEWA](#).

DEWA report Customer Minutes Lost of 1.06 minutes in 2023 and 0.94 minutes in 2024. [DEWA](#).

#	Details	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
1	The lowest customer minutes lost per year in the world at 0.94 minutes	0.94 minute	1.06 minute	1.19 minute	1.43 minute	1.66 minute	1.86 minute	2.39 minute	2.68 minute	3.28 minute	3.87 minute	4.99 minute	5.62 minute	6.88 minute
2	2.0% losses in electricity transmission and distribution networks	2.0%	2.0%	2.2%	3.3%	3.3%	3.2%	3.3%	3.3%	3.3%	3.3%	3.3%	3.5%	3.5%
3	4.5% water network losses.	4.5%	4.6%	4.5%	5.3%	5.1%	6.6%	6.5%	7.1%	8.0%	8.2%	9.1%	10.4%	10.9%

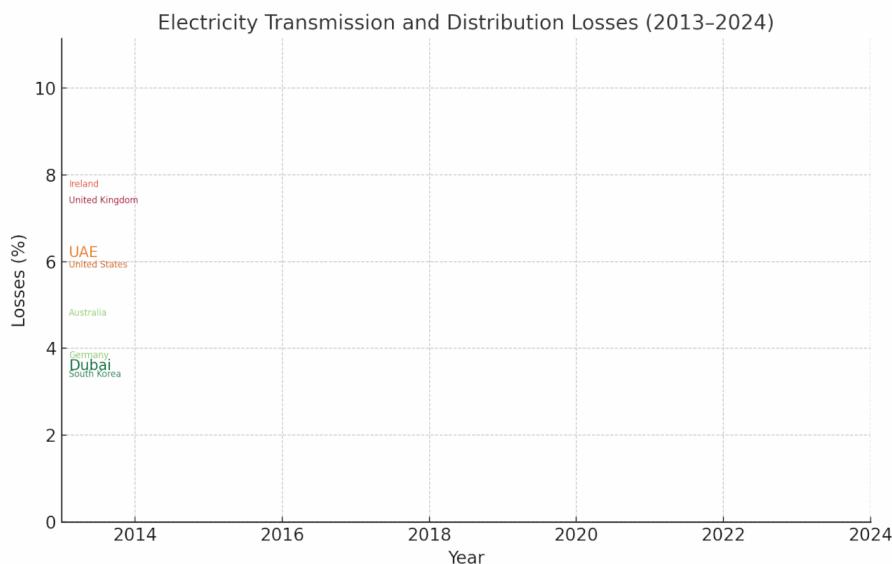
In 2023, DEWA recorded 2% losses in electricity transmission and distribution networks compared to 6-7% in Europe and the USA, and 4.6% water network losses compared to around 15% in North America. DEWA also recorded the world's lowest electricity Customer Minutes Lost (CML) per year in the world with an average of 1.06 minutes in 2023, compared to around 15 minutes recorded by leading utility companies in the European Union.

Customer Engagement: DEWA's Smart Meters Analysis and Diagnosis Centre remotely monitors smart meters every 15 minutes, enabling customers to proactively manage their consumption and detect anomalies promptly. [Media Office \(Gov. of Dubai\)](#)

"We manage smart meter data through a secure, integrated, resilient, and fully automated infrastructure. Automating meter readings helps customers receive instant information about their consumption patterns and manage, monitor, and control their consumption proactively and digitally anytime, anywhere. This also allows customers to promptly detect and fix water leaks to reduce waste, sustain natural resources, advance net zero and sustainable development, and ensure the happiness of all stakeholders. DEWA's Smart Meters Analysis and Diagnosis Centre monitors the smart meters remotely every 15 minutes," added Al Tayer.

Comparing Losses - A Closer Look

To put DEWA's reported 2% electricity losses into perspective, we visualised the last decade of transmission and distribution losses across a range of advanced economies. The chart below shows Dubai consistently reporting much lower losses than peers like the US, UK, and Australia, even before 2023's dip to 2%.



Though this performance is certainly impressive, comparisons like these are rarely straightforward. Electricity loss figures are shaped by many factors — from how system boundaries are defined (e.g. whether substations are included), to grid topology, data availability, and even climate conditions. Therefore, while the chart offers a useful directional insight, it's not a strict like-for-like benchmark. Instead, it invites a closer look at what's driving these differences.

Challenges and Considerations

Cybersecurity: The digital nature of smart grids necessitates robust cybersecurity measures. DEWA has established a Cyber Security Innovation Lab to safeguard its digital infrastructure and ensure data protection. [Gulf Today](#)

Integration with Renewable Sources: Balancing energy supply from intermittent renewable sources requires sophisticated grid management. DEWA's Virtual Power Plant (VPP) enhances renewable energy integration capabilities, supporting the Dubai Clean Energy Strategy 2050. [Gulf Today](#)

THE DUBAI CLEAN ENERGY STRATEGY 2050



Looking Ahead

DEWA's smart grid initiatives are integral to Dubai's transition towards a more sustainable and efficient energy future. By embracing digital technologies, DEWA is setting a benchmark for utility providers worldwide.

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