



MINISTRY OF
ENERGY

Accelerating Industrial Energy Efficiency in Ghana

The Ghana Industrial Energy Efficiency Readiness project

Using energy more efficiently in Ghana's growing industrial sector can help businesses save money, contribute to the national goal of universal energy access, while accelerating the country's transition away from fossil fuels and reducing greenhouse gas emissions. Put simply, there is power in the energy saved by Ghana's industrial sector.



Unlocking Ghana's untapped potential in industrial energy efficiency

Long known as one of the world's largest cocoa producers, Ghana's economic growth is increasingly being driven by a diversified mix of commodities, most notably oil. Beyond the extractive resource industry, Ghana's efforts to formalize its economy have ushered in a thriving services sector and an emerging industrial sector. The country's manufacturing industry is now being spurred by policies aimed at diversifying the economy and preventing an over-reliance on commodity markets. Assuming a solid comeback from COVID, the private sector — especially small and medium-sized enterprises — are predicted to expand and contribute to the growing manufacturing export sector.

Critical to securing this more diversified economic growth will be a national power supply that is reliable and meets the growing demand for energy, especially from Ghana's emerging industrial sector. And, given Ghana's determination to do its part to mitigate global climate change, the country's energy mix will need to become increasingly less reliant on fossil fuels.

Industrial energy efficiency offers Ghana a chance to make significant advances towards a clean energy sector that can power national progress, while mitigating global climate change.

“

Time is running out and every country in the world, including Ghana, must do more to tackle climate change. Industry has a big role to play and using energy more efficiently is one way we can cost-effectively bring down our emissions quickly, without compromising the growth of our critical industrial sector.”

Dr. Alhassan Idrissu, National Designated Authority to GCF, Ministry of Finance



Fast facts

Access to electricity

Ghana has a population of over 27 million people and an electrification rate of 85 per cent, which is one of the highest in Sub-Saharan Africa.¹

Energy mix

Ghana relies on a significant amount of fossil fuels (more than 60 per cent) for power generation and hosts the largest hydropower project of the Western African region.² Biomass, including charcoal, is regularly used in households, especially in rural areas.

Industrial energy demand

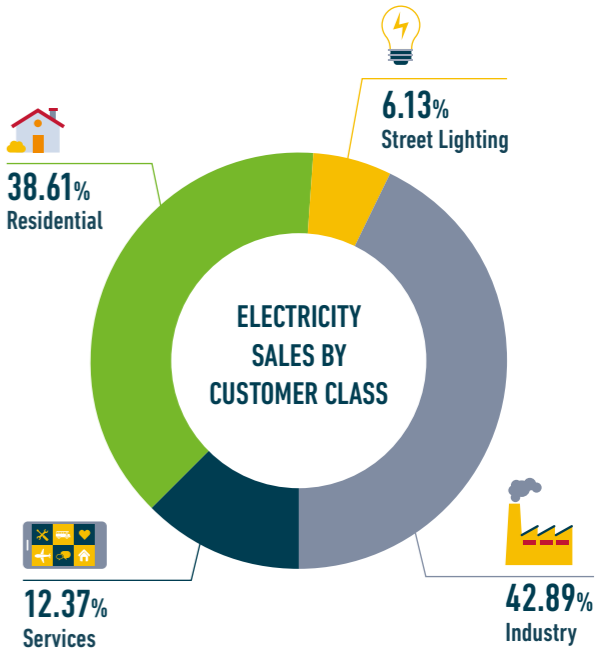
Demand for electricity in Ghana has increased by about 52 per cent over the last decade (2006–2016), and demand within the industrial sector has grown at a mostly steady pace.³

Industrial sector and GDP

The country's industrial sector contributes to around 25 per cent of GDP⁴ and employs over 20 per cent of the population.⁵ Mining and the quarrying sub-sector as well as manufacturing are tipped to ramp up over the coming years.

Climate change

Changes in rainfall, weather conditions and sea-level rise due to climate change are already affecting farming and fishing communities in Ghana as well as the production of power from hydro dams.



Energy Commission of Ghana, 2020 Energy Outlook for Ghana

“

Expanding Ghana's use of energy more efficiently across industry is an important step towards energy security for the entire country. That's why this initiative is so important for us.”

Dr. Robert Sogbadji, Renewable and Nuclear Energy Unit, Ministry of Energy

¹ Energy Commission of Ghana, National Energy Statistics 2000-2019

² Energy Commission of Ghana, 2020 Energy Outlook for Ghana

³ Center for Global Development, 'CGD Policy Paper 109 September 2017,' <https://www.cgdev.org/sites/default/files/electricity-situation-ghana-challenges-and-opportunities.pdf>

⁴ Trading Economics, 'Ghana GDP Annual Growth Rate', <https://tradingeconomics.com/ghana/gdp-growth-annual>

⁵ World Bank as cited in Trading Economics, 'Ghana - Employment In Industry (% Of Total Employment)', <https://tradingeconomics.com/ghana/employment-in-industry-percent-of-total-employment-wb-data.html>

Accelerating industrial energy efficiency in Ghana

The Ghana Industrial Energy Efficiency Readiness project

Ghana has committed to improving **energy efficiency by 20 per cent within industrial facilities before 2030**. A new national partnership with UNIDO, supported by the Green Climate Fund, is helping the country achieve this goal and unlock the significant benefits of industrial energy efficiency in the following ways:



Advocacy and policy support

UNIDO is facilitating a process that brings key national stakeholders together. The idea is to develop practical policy options, actions and programmes aimed at achieving the 2030 national industrial energy efficiency goal.



Industry know-how

A centre piece of UNIDO's work in Ghana is demonstrating the opportunities that energy management systems (EnMS) can offer for industries. To do this, 10 'champion industries' are being supported to implement the internationally regarded ISO 50001 energy management system. Simultaneously, UNIDO is training a group of 30-35 specialised local energy management consultants who will be equipped to meet the demand for industrial energy efficiency services long into the future. This is happening alongside an industry-wide awareness raising campaign to showcase the benefits and encourage uptake.

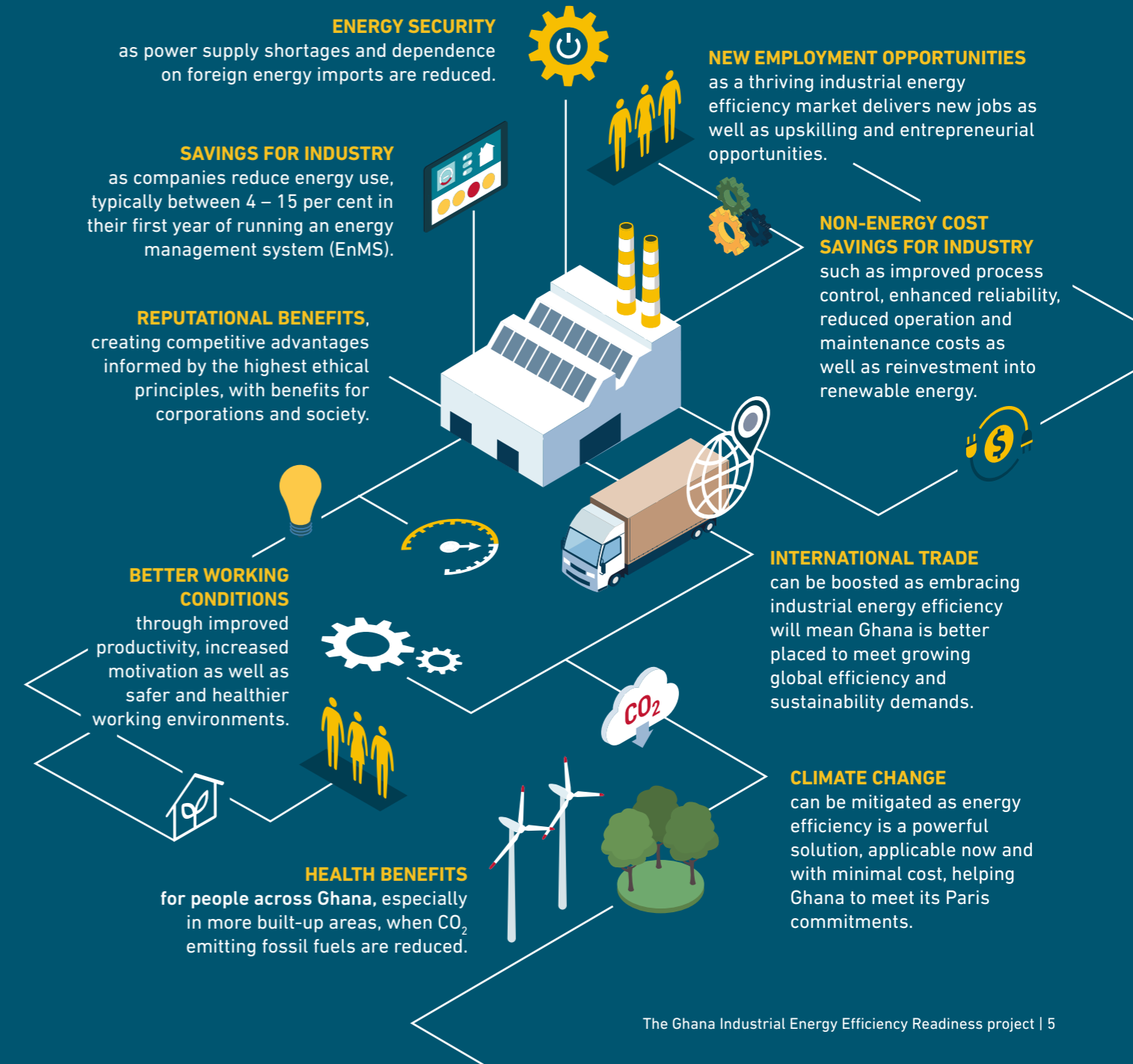


Finance for efficiency

UNIDO is also working to assess and develop an initial pipeline of industrial energy efficiency projects for commercial lending. At the same time, UNIDO is working with local finance institutions to build their capacity for financing energy efficiency projects through awareness raising and the development of funding and credit risks tools.

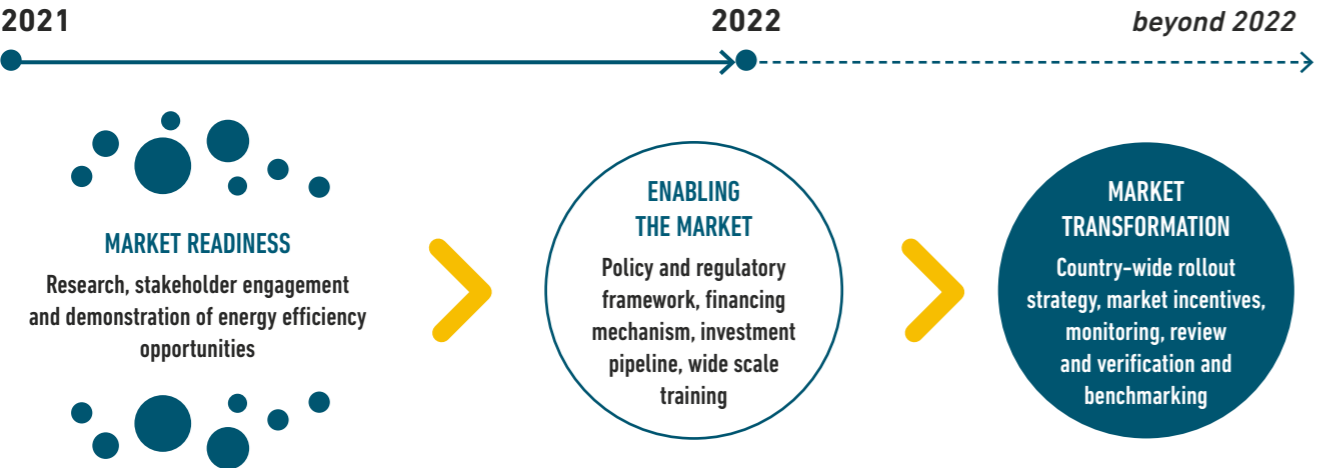
To better understand the potential of industrial energy efficiency in Ghana, in 2019 UNIDO conducted a scoping study. The study was based on the analysis and review of various industrial plants in Ghana's steel and palm oil sectors. The findings revealed compelling improvement opportunities for industrial resource management and energy efficiency. For example at one factory energy saving opportunities amounting to 4.8 GWh were identified, representing 13.9 per cent of the total plant's energy consumption.

The benefits



Beyond 2022: Building on the Readiness project

Once the readiness phase of this project is complete it will be critical to capitalize on the momentum. Scaling up a thriving energy efficiency services market in Ghana will require coordination between the private and public sectors, incentives for further investment and access to qualified energy efficiency expertise. This needs to be supported at numerous levels. Strong policy will be needed, alongside awareness of the opportunities that industrial energy efficiency provides for individual industrial facilities. Access to credible data and knowhow, standardisation of technology-specific solutions, tight contractual frameworks and legal enforcement will also all need to be in place.



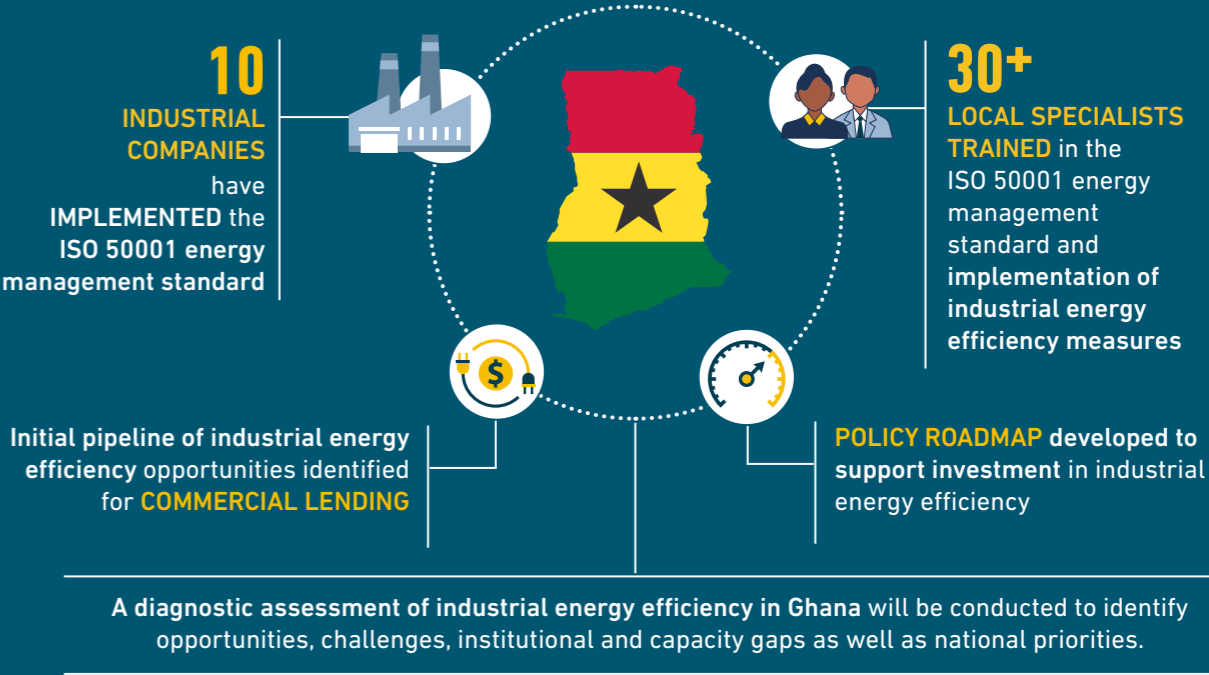
“

We know for a fact that employment programmes that promote energy efficiency and the renewable energy sector have a tendency to create more jobs. In the past decade alone, millions of new jobs have emerged on the back of renewable and energy efficiency sectors.”

Mr. Fakhruddin Azizi, UNIDO Representative in Ghana and Liberia



Project targets



About the Industrial Energy Accelerator

In partnership with key government agencies and industry stakeholders, the Industrial Energy Accelerator works on the ground to rally government, industry and finance around solutions that ignite change in energy-intensive industries. We then take our knowledge and experience to the world, sharing what we have learned to inspire a global movement for industrial energy efficiency.

CONTACT

Since its launch, the Accelerator has engaged dozens of critical actors on the road to energy efficiency. For more information on how your organization can support and join the movement contact the Accelerator's Ghana project coordinator, Nurzat Myrsalieva: n.myrsalieva@unido.org

To find out more about the Industrial Energy Accelerator contact our global project manager, Rana Ghoneim: R.Ghoneim@unido.org

GHANA PROJECT PARTNERS

Ministry Energy, Ministry Finance, Ministry of Industry and Trade, Ministry of Environment, Science, Technology and Innovation, UNIDO

Supported by: GCF under its Readiness and Preparatory Support Programme



Visit: www.industrialenergyaccelerator.org