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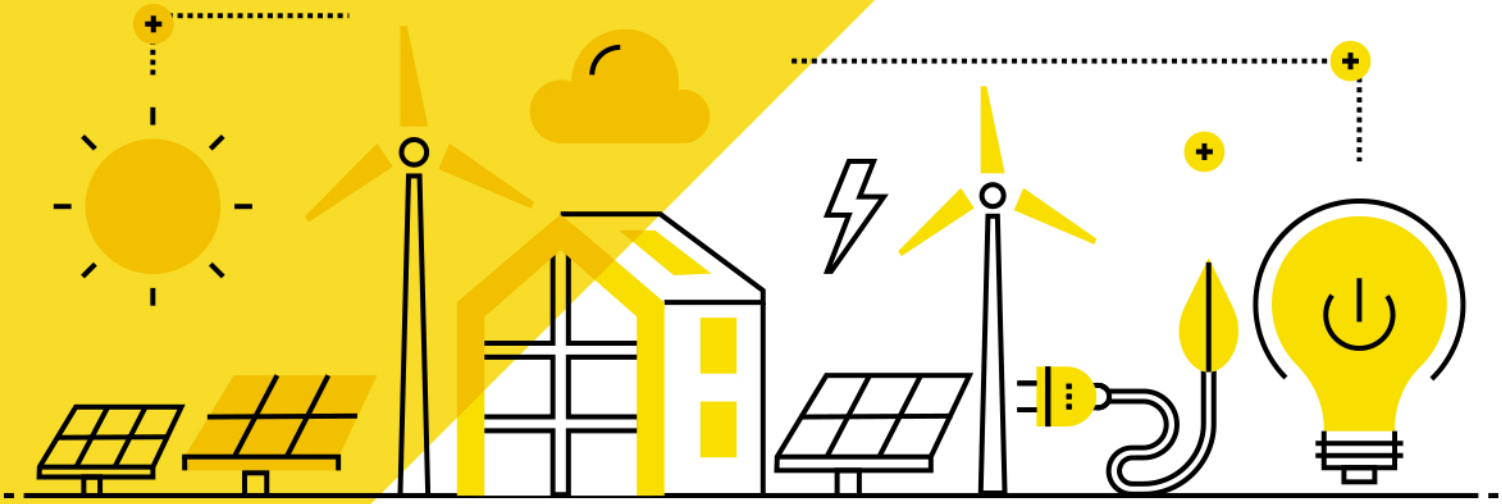

SUSTAINABLE ENERGY

A possible Future

APU is a knowledge-based consultancy company providing research and analysis, data, technical and business advice and services, sought by business leaders and strategists, to help them capture tomorrow's opportunities, today.
APU delivers market research reports covering markets, industries, countries, companies and technologies.

By continuously updating our desk research, and leveraging market research publications from leading institutes and consultancies worldwide, we provide relevant, current and credible research, critical to the success of your business.

Our clients use our insights, critical analysis, statistics and forecasts to help make strategic business decisions and grow their organizations. Our approach combines deep insight into the dynamics of industries and markets to help clients build more capable organizations and sustain lasting results.

Global Business Intelligence

Trends and forecasts for 18 global industries and over 1200 industry subsectors in up to 60 economies.
Our subscription services for data, news, analysis and forecasts, help clients understand how the world is changing and how that creates opportunities to be seized and risks to be mitigated and managed.

Sustainable Energy:

A possible Future

The global energy consumption from 1900s faces a constant growth at a fast pace, particularly in the transportation and industrial sector. Energy utilization per capita also constitutes a significant factor to evaluate the energy demand of the population in a region. Hence, governmental strategies should focus on the sustainable exploiting of various energy resources, as well on the needs of a continually rising population, and the establishment of health and safety measures for present and future efficiency. The most common energy sources used to be non-renewable, with a high effect on the environment due to the carbon emissions.

Energy is essential, in all aspects of life and in several industries. The demand for energy from fossil fuels (oil, gas, coal) depends on geography, availability, extracting costs and environmental sustainability. There are also the alternative energy resources such as wind, solar, hot springs, biomass, tides, etc., which have gained popularity in recent years for their ability to generate electricity and heat. The fossil fuel sources are non-renewable, with limited availability, and create significant pollution to the atmosphere with carbon emissions. The alternative energy sources are renewable, with continuous availability, and generate much lower levels of carbon emissions. However, their utilization is still limited due to the necessity of adequate technology in order to transform them into usable forms.

Source 1: https://kdmarketinsightsblog.com/2019/09/energy-management-systems-market-expected-to-reach-cagr-of-13-5-forecast-to-2023/

Actions in order to limit the CO_2 emissions have already been taken. The principal one is the shift from conventional energy sources to renewable ones in order to cover energy demand while managing emissions' levels, thus, preventing air pollution.

In order to achieve global transformation to a more sustainable future, energy management actions and techniques have been developed along with innovative technologies and appropriate frameworks. The current energy mix is reviewed with regards to energy management and consumption, presenting all the issues, challenges and trends for management solutions, CO_2 emissions, and economic feasibility. Future scenarios for achieving process improvements are also evaluated and advanced energy technologies are underlined.

The main issues of the energy sector are emphasized together with assessments for investments for more effective energy utilization and carbon emission management. Numerous start-up and scale-up businesses have introduced management and energy solutions to enhance energy transformation, while, oil and gas and relevant industries- which are amid the largest energy consumers- have demonstrated that solutions for declining CO_2 emissions and elevating energy grid ought to be explored. Also, six specific future scenarios are introduced, involving energy demand and supply operations as well as developed technologies which may succeed noteworthy alterations in CO_2 emissions and costs. Through these examples, issues of energy demand versus CO_2 neutral policy, sustainable switch, retrofit strategy, and process escalation are highlighted.

Vooradi, R., Anne, S. B., Tula, A. K., Eden, M. R., & Gani, R. (2019). Energy and CO_2 management for chemical and related industries: issues, opportunities and challenges. *BMC Chemical Engineering*, *1*(1), 7.


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SPECIAL INTELLIGENCE REPORTS
Digital Transformation Accelerator Report
Connecting the Digital Enterprise Dots & Digital enabled Delivery
Global Sourcing Insights
ICT
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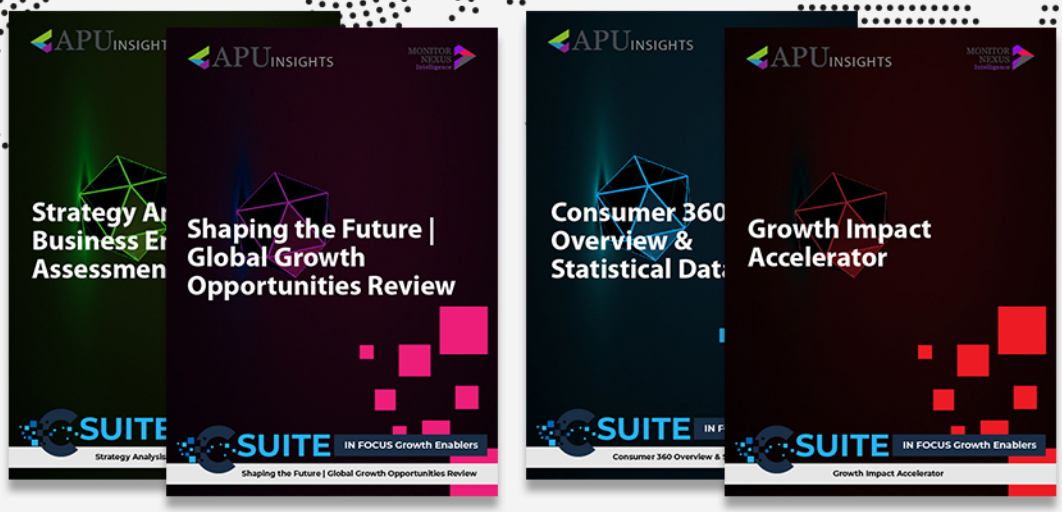
Digital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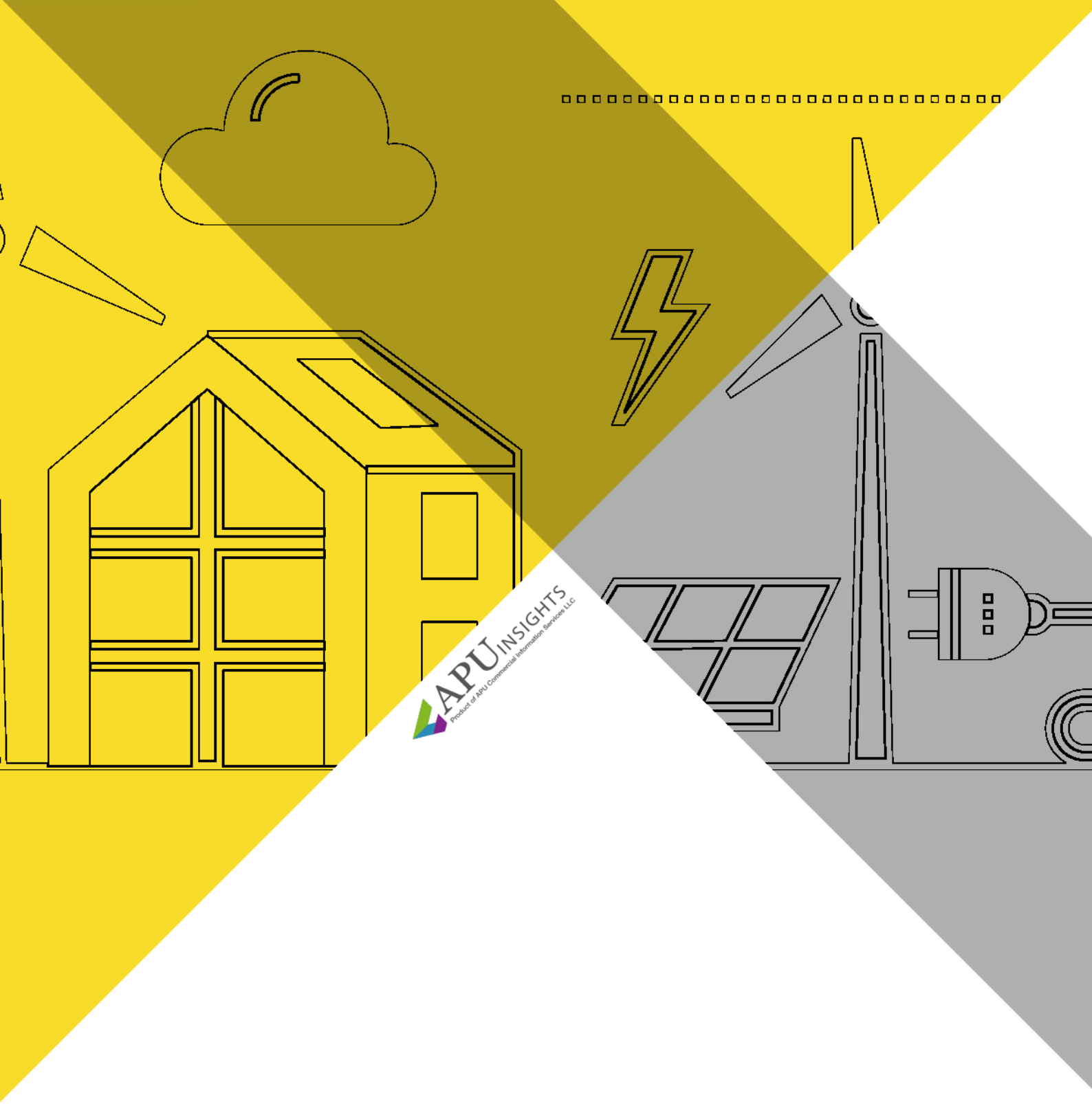

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