

Are long-term energy planning studies in Iran satisfactory?

Conclusion and recommendations In this paper, the major long-term energy planning studies in Iran were reviewed. The reviews show that energy and power sector developments have mainly resulted from short-term plans and accordingly, the present situation is unsatisfactory.

Which technology is the dominant technology in Iran's long-term power sector?

The results showed that combined cycle would be the dominant technology in Iran's long-term power sector. Moreover, electricity generation from non-hydro renewables, solar PV in particular, should grow faster than the total power generation.

What are the benefits of long-term energy planning in Iran?

Manzoor and Aryanpur quantified the likely benefits of commitment to the long-term energy planning in Iran. They have shown that developments in the power sector have mainly resulted from short-term plans, while the commitment to the long-term energy planning would have reduced the power system costs by \$0.7-\$3.0 billion per year.

Is Iran a good source of energy?

Besides the abundant fossil fuel resources, Iran possesses a significant potential of renewable energy sources including water, solar, wind, biomass, and geothermal. Despite the huge potential both in fossil and non-fossil energy sources, Iran is facing some problems in its energy sector, more specifically in the power sector.

Why is Iran's energy supply system uncertain?

They mainly focused on uncertainty of investment costs for Iran's energy supply system. The uncertainties predominantly emerged from insecurity in the Middle East region, inflation and unemployment crises, obstacles in private ownership, instability of laws and lack of updated laws, and lack of transparency in foreign investments acts.

How much natural gas is used in Iran's power plant?

Investigating the shares of different fuels in Iran's power sector during the previous three decades shows that the natural gas contributes between 42% and 75%, and the rest share belongs to liquid fuels [2,72]. It is assumed that the highest amount of available natural gas for power plant consumption in the base year is 70%.

The smart grid provides solutions to the current obstacles of power system operation, including reliability, environmental sustainability, and energy efficiency challenges. Hence, the smart grid is considered as a new structure to deal with operational problems.

This paper gives a comprehensive comparison of the existing grid with the future grid and as a result, an

overview of essential requirements for the implementation of a smart grid in Iran is obtained.

By 2025, the Islamic Republic of Iran aims to develop an electric smart grid as an efficient, secure, flexible and stable grid that delivers required high quality and reliable power to consumers and stakeholders.

This infographic summarizes results from simulations that demonstrate the ability of Iran to match all-purpose energy demand with wind-water-solar (WWS) electricity and heat supply, storage, and demand response

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In this section, the previous studies about Iran's energy planning, including governmental and academic studies, are comprehensively examined with the purpose of developing a more practical plan for the power sector, considering the strengths and limitations of the previous attempts.

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Evaluating Iran's day-ahead market and compare its structure with other markets. Explaining the centralized and decentralized markets and the situation of Iran. Investigating significant challenges in the Iranian day-ahead market.

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