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**Title- Impact of Energy Efficiency Programs on Fuel Mix in Saudi Arabia**

The electricity production in the Kingdom of Saudi Arabia is characterized by very high annual growth rates, low efficiency, and heavy dependence on liquid fossil fuels. The annual growth rate of the peak demand over the last decade has been in the range of 8 to 10 percent. The overall electricity production efficiency is in the range of 32 percent, and the liquid fossil fuels represent about 50 percent of total fuel mix.

Over the last few years, the electricity industry in Saudi Arabia initiated and implemented several programs to curb the high growth rate, enhance the efficiency, and reduce the liquid fuel share in electricity production. Demand Side Management (DSM) programs are expected to reduce the peak demand in 2025 by about 14%. Several demand side energy efficiency programs are implemented. These include mandating thermal insulation of all buildings, and implementing high efficiency standards on all electrical equipment produced in the country or imported. The efficiency measures are expected to reduce electricity production by about 8% in 2025. On the supply side, the electricity companies are executing programs that are expected to raise the overall supply efficiency from its current level of about 32% to about 42% in 2025. In addition, the introduction of renewable and nuclear energy will reduce the dependence on fossil fuels substantially. This presentation will provide an overview of these programs and measures and their impact on fuel mix and energy policies in Saudi Arabia.