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»The Lights Won't Go Out«

1. Prof. Kemfert, seven nuclear power stations were removed from the grid for a three-month moratorium. Will the lights go out in Germany if these power plants are never reconnected? No, the lights won't go out. The fact is that we produce more electricity in Germany than we consume and, even in the past, we have exported much more than we have imported. Naturally, the exports are now dwindling. The utilization of existing power plants is also increasing. Overall, while we still have overcapacities, these are shrinking appreciably.

2. What would be the repercussions of leaving these power stations shut down for the long term? Keeping these nuclear power stations shut down for the long term should mean minor increases in electricity prices. This would primarily be due to the trading prices rising. On the other hand, if the trading price climbs, then the share of costs for funding renewable energies will fall. These two effects would offset each other, so that the result would be an only minor increase in prices.

3. Would it be possible to withdraw from nuclear power immediately? No. That wouldn't work, because then we wouldn't have enough output to cover demand at all times. We have to bear in mind the issue of grid stability. A large portion of the nuclear power plants leaving the grid are in southern Germany. This shortage has to be compensated by other power plants, and these can't simply be constructed in one year. However, it would be possible to initiate the plans of the Red-Green Coalition, which stipulate that all nuclear power stations will be taken offline by the year 2021/22.

4. How strongly would electricity prices increase if all nuclear power plants are taken offline within the next ten years? We forecast that the trading price of electricity would rise by about 22%. That's only the trading price, though. This would again be partly offset by a reduction in the share of costs for funding renewable energy. In addition, let's not forget that the grids have to be expanded, which will also be a cost factor - though only a moderate one. The greater proportion of electricity generated using coal would increase the CO_2 price, though cheaper imports would increase in turn. Overall, households would only have to face a minor increase in the price of electricity, somewhere between 1.5% and, at most, 6%. When we consider the offsetting factors as well, you can see that the expected price increase is quite moderate.

5. What impact would the diverse withdrawal scenarios have on CO_2 emissions and the government's climate targets? This would now depend on how many of the old, inefficient coal-fired power plants we reactivated. Our own scenario predicts that more gas-fired power plants will be used in addition to the coal-fired plants. CO_2 emissions would increase by up to 9%, which is approximately 26 million metric tons.

6. Can we make up for the shortage of energy caused by gradually shutting down the nuclear power plants if we expand renewable energy more quickly? Over the next ten years, we'll be able to double the contribution of renewable energy from the current 17% to 35%. This is in line with the volumes of nuclear energy. The question is what other power stations are being used. They still account for 65% of our energy needs, and most of them are coal-fired. The best thing would be to reduce the volumes from coal and replace them with better gas-fired plants because the latter generate less CO_2 and can be better combined with renewable energy.

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