The Director of the Swiss Federal Office of Energy spoke about Switzerland’s plans to replace nuclear energy in the Swiss energy mix, emphasizing the role of energy efficiency and support for renewable energy in reaching this goal.

Dr. Steinmann began with an overview of Switzerland’s energy situation, with the majority of its electricity being provided by hydropower. Most of the remaining electricity supply comes from nuclear plants, either located in Switzerland or in France. The Fukushima accident produced a significant change in Switzerland’s nuclear policy, resulting in a plan to phase out nuclear (both domestic and imported) altogether.

The government’s aim, Steinmann explained, is to replace these resources with new sources of renewable power, while controlling the growth of demand through energy efficiency measures. To accomplish this, an existing CO2 tax on stationary fuels (already at 36 Swiss Francs per ton) will be raised to 84 Swiss Francs per ton, and a set of financial supports, incentives, and requirements for building efficiency will be put into place.

Dr. Steinmann especially emphasized the role that increasing energy efficiency of buildings plays in Switzerland’s overall energy strategy. Energy efficiency in new buildings has increased dramatically since 1975, with the newest buildings being energy-neutral or even energy-positive. In the residential sector, the emphasis on energy efficiency is leading to a significant expansion in the use of heat pumps, Steinmann noted, installed in more than 80% of all new homes in 2013. The Swiss government is also focusing on incentives to refurbish existing buildings to make them more energy efficient, and has recently dedicated 1/3 of the revenue from the existing CO2 stationary source tax to supporting the building refurbishment program.

Other policies intended to support the government’s goal of a transition away from nuclear power by 2050 include a change in the approach to support for renewable energy at the residential level, where feed-in tariffs have been replaced by up-front subsidies for new renewable energy systems. At larger scales, feed-in tariffs remain, along with an emphasis on streamlining permitting process to make the siting process for new energy sources easier. In addition, the government is supports innovative energy policy projects, like an electric passenger bus that can recharge its battery in only seconds.

Dr. Steinmann spoke as part of the Kennedy School’s Energy Policy Seminar Series, which is jointly sponsored by the Energy Technology Innovation Policy research group of the Belfer Center on Science and International Affairs and by the Consortium for Energy Policy Research of the Mossavar-Rahmani Center on Business and Government.