***The Belgian Capacity Market: Nuclear phase-out, Reliability Options and the Clean Energy package***

François Boisseleau, Engie,

+ 32 473 70 39 72,

Francois.Boisseleau@engie.com

## Overview

## In 2002, the discussion of the Belgium draft law on nuclear energy exit recognized the energy challenges the country would face in the future: maintaining economic growth, ensuring generation adequacy, liberalizing the electricity market, meeting greenhouse gases emission under the Kyoto Protocol, replacing nuclear and coal, improving energy efficiency, and increasing the contribution of renewable energies. Almost 20 years later a lot has been done on some elements while very little on others. This paper focuses on generation adequacy and the implementation of a Capacity Remuneration Mechanism (CRM) to cope with the nuclear phase out in Belgium.

## To address generation adequacy, the Belgium Parliament in April 2019 approved a Bill on a CRM. The objective of the CRM is to encourage new investments after Belgium’s nuclear exit. If the CRM is approved at European level and if the future Belgium government decide to implement the CRM the first auction is planned for October 2021 with a first delivery of capacity in November 2025. Without anticipating the final decision at both European and Belgium level the first year of design of the Belgium CRM has led to several controversial debates and provide already interesting lessons for other markets in Europe.

## Methods

## First the specificity of the Belgium electricity market will be addressed focusing on the issue of nuclear exit and adequacy needs. Secondly several key elements of the proposed design will be discussed in the light of international experiences: reliability option design, T-1 versus T-4, Multi-year contracts, cost of the CRM, pay-back obligations, demand side participation, Pay-as-bid Versus Pay-as clear. Third the different perspectives of stakeholders will be highlighted. Last but not least, the Belgium CRM will be the first one analyzed in the context of the new European Clean Energy Package which creates an additional complexity layer.

## Results

## In conclusion, one year after the CRM law, significant progress have been made in the design, several important questions remain unresolved and some early lessons can be drawn.

## Conclusions

## It is unclear at this stage whether the proposed design and the current political dynamic in Belgium is addressing the initial concern of generation adequacy and regulatory uncertainty.