

Short circuit in Belgium ? Towards stable and affordable electricity for all consumers



#### **30 SEPTEMBER 2011**

Belgian FPS Foreign Affairs, Foreign Trade and Development Cooperation Conference Room Sax

8bis Petit Sablon, B-1000 Brussels

### **CONFERENCE REPORT**

#### INTRODUCTION

On Friday 30 September 2011, the Belgian Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation and the Egmont Institute convened a half day conference entitled "Short circuit in Belgium? Towards stable affordable electricity for consumers in Belgium". The gathering aimed at assessing the current state of affairs in the country's path towards the ideal energy mix, allowing it to meet its international commitments with regard market liberalization and the environment while at the same time securing a fertile business climate.

Challenges that were discussed included the critical choices for the ideal energy production mix, as well as the necessary infrastructure improvements and the political hurdles towards a predictable evolution of the Belgian electricity market.

Speakers and other participants included inter alia decision makers and advisers from the federal and regional Belgian governmental sector; senior public servants from Belgian and European institutions; senior representatives from the Belgium based business community; representatives from regulatory bodies; consumer organizations; and independent researchers from the think tank and research community.

This report collects the main reflections and recommendations that were put forward during the discussions. In observation of the Chatham House Rule the text below shall not link any of the statements with their respective individual source.

### **TODAY'S POLICY DRIVERS**

### **Recent policy shifts**

Belgian energy policy choices - and per consequence electricity related policy choices - are generally determined by the desire to secure supply, to moderate consumption, to safeguard environment and to assure consumer protection. The success in achieving these goals is dependent on *i.a.* the status of energy market liberalization, the development of energy infrastructure, the progress in technological innovation the improvement and of energy efficiency.

Specific events, too, are clearly influencing the current decision making climate. In the summer of 2011 the German Bundestag approved plans to phase out all the country's nuclear reactors by 2022, wrapping up a major policy switch<sup>1</sup> of the Merkel government following the nuclear disaster at the Japanese Fukushima Daiichi power plant.

The Siemens conglomerate - Europe's largest engineering group - followed suit shortly after. In September 2011, CEO Peter Loescher announced in Der Spiegel that Siemens would retreat from the nuclear power plant construction business, while continuing to build turbines and other separate power plant pieces that may or may not be used in nuclear power plants. Loescher said the decision was an answer to political and social opposition to nuclear power in Germany.

#### The EU context

In 2007 the EU endorsed an integrated approach to climate and energy policy in order to efficiently tackle three

<sup>&</sup>lt;sup>1</sup> Chancellor Merkel announced an ambitious energy policy: 35% of renewables by 2020, 80% by 2050.

challenges at the same time: combat climate change; increase the EU's energy security; and strengthen its competitiveness. The measure stick of progress is the EU wide so-called "20-20-20" target: a 20% cut in emissions of greenhouse gases by 2020, compared with 1990 levels; a 20% increase in the share of renewables in the energy mix; and a 20% cut in energy consumption. The EU Member States are bound by national targets that fit this general framework.

Since 80% of the greenhouse gases originate from heat and production as well as from transport, one of the main energy-related policy drivers in the EU is the reduction of greenhouse gases (GHG) at their sources. The Kyoto Protocol requires the EU to reduce GHG emissions to 8% below 1990 levels by 2012. The 20-20-20 target, however, prescribes a 20% cut in emissions of GHG by 2020, compared with 1990 levels. The latter target is rooted in the EU strategy for jobs and smart, sustainable and inclusive growth adopted the European Council in June 2010. The European Commission's Annual Growth Survey 2011 indicates that many EU Member States need to make additional efforts to meet their obligations under the so called Effort Sharing Decision. Indeed, only 11 Member States are expected to meet their commitment ceteris paribus.

As for renewables, Article 4 of the renewable energy directive (2009/28/EC) required EU Member States to submit national renewable energy action plans (NREAPs) by 30 June 2010. These plans provide detailed roadmaps of how each Member State expects to reach its legally binding 2020 target for the share of renewable energy in their final energy consumption.<sup>2</sup> They

<sup>2</sup> Belgium's NREAP can be downloaded here: http://ec.europa.eu/energy/renewables/transparency\_platform/doc/national renewable energy action plan\_belgium\_en.pdf take into account the effects of other energy efficiency measures on final energy consumption. Indeed, if the reduction in energy consumption is higher, the share of energy from renewable sources can be lower to reach a specific target. They also establish procedures for the reform of planning and pricing schemes and access to electricity networks, promoting energy from renewable sources.

The EU aims at reducing primary energy consumption by 20% compared to projections for 2020. Energy efficiency is considered the most cost-effective way of reducing energy consumption while maintaining an equivalent level of economic activity. Reducing energy consumption and eliminating energy wastage are among the main goals of the EU. To achieve its goal, the EU continues to mobilize public opinion, decision-makers and market operators and to set minimum energy efficiency standards.

### The Belgian context

Belgium's current political agenda is dominated by historically long negotiations to forge a federal coalition government. The ongoing negotiations laid bare a specific Belgian energy policy maker's challenge: the fragmented decision-making process in a highly complex federal system.

Energy policy experts have pleaded repeatedly for the creation of a national platform where policy measures of the federal. regional. provincial communal level can be tweaked and molded to be in fine tune with each other. Such platform would allow for a yearly setting of goals and the close surveillance goals. progress towards these Similarly, many have called for a energy reinforced administration, flanked by a strong and fiercely independent national regulator.

# THE BUILDING BLOCKS OF AN IDEAL ENERGY MIX FOR BELGIUM

### The ingredients of the mix

The choice of the ideal energy mix has to be made in function of a series of keyfactors: security, cleanliness, affordability, profitability, technological feasibility, availability of support schemes, etc.

The GEMIX report of January 2010 provides comprehensive insight into the variables that determine the ideal energy mix for Belgium. Its findings remain largely up to date and sketch out a number of Belgian scenarios that allow the country to secure its supply, to remain competitive, and to safeguard the environment. Each of the scenarios needs a thorough cost-benefit assessment, wary of the politics that no doubt play a role in the final decision too.

As the WP 21-08 study of the Belgian Federal Plan Bureau has shown, a reduction of energy user demand to an accumulated total of 400 TWh is feasible by the year 2020. While moderating demand is a crucial piece of securing supply, other elements will need to be taken into the policy measure mix as well. A major challenge will be the replacement of 700 to 800 MW currently still produced by nuclear reactors, using other fossil fuels such as gas and renewable energy sources. To make things even more challenging, other nonclassical power generation nuclear facilities are also rapidly approaching their expiration date, thus making additional investments highly necessary.

# Fossil fuels remain important, renewables are growing

Electricity consumption is still increasing, even though overall energy consumption is decreasing. The share of

renewable electricity production remains small at best. Massive and affordable technologies to store green energy are not available yet in Belgium.

Regardless of nuclear sector developments, the Federal Plan Bureau expects the renewables production to meet 13%, i.e. 57 TWh by 2020. In the greenest of scenarios, however, Belgium will need to build a fully operational wind turbine every second day until 2020, even if in summer time solar energy is expected to have a 50% electricity production potential.

Obviously, the lack of electricity storage capacity requires the continued use of fossil fuels, with gas being the cleanest and most attractive option. With the shut-down of the nuclear power generation getting ever more likely, a possibility of shortage needs to be borne in mind as a wake-up call to policy makers to create fertile soil for alternative investments.

Belgian policy makers will need to decide to which extent the renewable energy sector should be treated as an infant industry that can be subsidized. If so, the policy makers should clarify who should pay for these subsidies.

continues to be entirely Belgium dependent on import for its fossil fuels. It will continue to need these fossil fuels for much of its electricity production for the next 20 years and onwards. However, share is expected to drop significantly in favor of increased power from generation renewable energy Importantly, Belgium's sources. development of electricity production from renewable energy sources has been largely independent of the so-called primary mix of fossil and nuclear energy. The assumption that the former will simply fill the gap that reduction of fossil fuelled power generation will leave behind is erroneous.

### **Decentralizing production capacity**

Even drastic simplification of administrative procedures, the GEMIX report says, will not guarantee the necessary investment climate compensate for foreseen production cuts from fossil fuels. Transmission tariffs and network rules will be a crucial piece to encourage investment by big players. Policy makers have to ensure that there is no monopoly on energy production and that licenses for production plants can be shared. Despite the market liberalization, there are calls for more rules to force the opening up of what is still quasi-monopoly Paradoxically, subsidies will continue to play a major rule towards the wished-for market liberalization.

Decisions on where investments are made are increasingly dependent on the cost of energy. An example worth considering is the BASF Antwerp plant. The German chemical giant has decided to build its own electricity production plant in order to secure electricity provision at a predictable price. Such investments indicate the industrial consumer's readiness for decentralized electricity production on site. Many such consumers would be relieved to receive governmental support for these steps.

# Improving the transmission and distribution grid

Production capacity is only one side of the electricity issue. Transmission and distribution are equally important. An enormous amount of investment into electricity grids is needed in Belgium, both to connect to international grids and to improve the management of local grids. Belgium is likely to have shortages of electricity by 2015 if no extra capacities for the transport of electricity are added to its existing network. Without the right transmission networks, it is impossible to efficiently increase

production. At this moment, more imports from abroad are simply impossible due to a lack of transmission capacities.

Again, attracting investors is a key element in the improvement of production and transport alike. International competition is largely contributing to the attractiveness – or lack thereof – of Belgium as a place to invest.

In the current climate, it remains highly risky to invest in energy infrastructure development on the Belgian market. Many argue that Belgium loses a large amount of investments to a heavily subsidized renewable energy sector in Germany. Renewable energy players perceive the Belgian market as a rather unattractive place for investment, because of the remaining dominance of one large player setting the rules.

A strong regulator that enforces transmission tariffs and network rules may very well encourage investments by big consumers. Financial support to kickstart such investments may be recuperated from profits of existing operators.

# DEPLOYING SMART GRIDS IN BELGIUM

### Talking the talk: defining smart grids and their benefits

Smart grids have been the talk of the town for a considerable number of years now. Yet, it is not always fully understood what is meant by smart grids, and to which extent their deployment is realistic in the short term.

The European Commission defines a smart grid as an electricity network that can cost efficiently integrate the behavior and actions of all users connected to it –

generators, consumers and those that do both – in order to ensure an economically efficient, sustainable power system with low losses and high levels of quality and security of supply and safety.

12 April 2011. the European Commission issued a Communication entitled "Smart Grids: from innovation to deployment" in which it explains its vision on how smart grids can make an important contribution to the new strategy for sustainable and inclusive growth. The European Commission has identified smart grids as a crucial element for a low-carbon electricity system. facilitating demand-side efficiency, increasing the shares of renewables and distributed generation, and enabling electrification of transport.

Additionally, smart grids will give consumers the ability to follow their actual electricity consumption in real time: smart meters will give consumers strong incentives to save energy and money. Estimates show that smart electricity grids should reduce CO2 emissions in the EU by 9% and annual household energy consumption by 10%. They also help to ensure secure functioning of the electricity system and are a key enabler of both the internal energy market and the integration of vast amounts of renewables.

In short, according to the European Commission, the difference between today's average grid and a smart grid of the future is the grid's capability to handle more complexity than today in an efficient and effective way in order to:

- better facilitate the connection and operation of generators of all sizes and technologies;
- allow consumers to play a part in optimizing the operation of the system;
- provide consumers with greater information and options on how they use their supply;

- significantly reduce the environmental impact of the whole electricity supply system;
- maintain or even improve the existing high levels of system reliability, quality and security of supply;
- maintain and improve the existing services efficiently; and
- foster market integration towards a European integrated market.

### Walking the walk: breaking through the barriers

In the last ten years, some 5.5 billion EUR has been invested throughout Europe in about 300 smart grid projects. The EU is in the early stages of the actual deployment of smart grids. Not more than about 10% of EU households have a smart meter of sorts installed. Italy has taken a noteworthy lead with about 2 billion EUR investments made, whereas Belgium has lagged behind with no more than about 1 million EUR invested in the development of a new generation smart grid.

In order to speed up progress towards the development of smart grids in Europe, the European Commission proposes to focus on:

- developing EU wide technical standards;
- ensuring data protection for consumers. (e.g.: privacy concerns have blocked policy changes in the Netherlands whereas the initially expected privacy related protests in Sweden one of only two EU countries that have widely spread smart meters have never significantly materialized)
- establishing a regulatory framework to provide incentives for smart grid deployment;
- guaranteeing an open and competitive retail market in the interest of consumers; and

 providing continued support to innovation for technology and systems.

Without a technological shift, though, the EU will fail on its 2050 ambitions to "decarbonize" the electricity and transport sectors. The so-called Strategic Energy Technology (SET) plan sets out a medium-term strategy valid across all sectors. Indeed, the Commission has launched several initiatives for the modernization of energy networks. Over the last decade, about 300 million EUR has been spent on these projects, financed mainly through Framework Programmes 5, 6 and 7. In May 2005 the Commission launched the European Technology Platform for Smart Grids with the aim of creating a joint EU vision and research agenda for smart grids.

### Securing investments for smart transmission and distribution

There remains a considerable gap between current and optimal investment in Europe, which can only partly be explained by the current economic downturn. Policy makers, electricity producers and electricity transporters agree that massive investments, innovation and feasibility studies are urgently needed. They don't, however, agree on the ways through which such costly investments have to be secured.

Grid operators and suppliers are expected to carry the main investment burden. However, unless a fair cost sharing model is developed and the right balance is struck between short-term investment costs and long-term profits, the willingness of grid operators to undertake any substantial investment may well be limited.

Whereas Belgium's current electricity transmission systems are smart to a certain degree, the distribution systems are not. A hurdle towards rectifying this situation is the unpredictability of the return on investment. The combination of a number of elements render full understanding of the needs of the distribution system of tomorrow rather complicated:

- There is already a lot of production directly transferred through the distribution grid;
- There may or may not be a rather large increase of the loads on the distribution grid as the prospect of electric cars becomes more promising;
- Much of the debate is distorted by an erroneous focus on the installation of smart meters in households. Some would rather see the smart meter as the end piece of a long infrastructural improvement process;
- A redistribution of the stakes and tasks in the whole electricity market will impact decision making and investments: there is a trend towards consumers assuming a position of both buyers and sellers, much like retailers assuming a role of sellers as well as buyers.

## A common understanding and shared sense of urgency

During the discussions, the attending policy makers, grid operators, consumers and experts alike expressed a shared optimism with a view to the possibility of speeding up the smart grid deployment in Belgium. A clear potential for improvement was identified and massive infrastructure and innovation investments were considered *conditio sine qua non*.

Moreover, a better grid investment may well enable the further liberalization of the market as national and foreign competitors increasingly obtain similar access to their potential clients. At the same time, all intervening speakers underscored the urgency of investments. Distribution deficiencies are indeed very

likely to become intolerable by 2020 if no urgent action is undertaken.

Most speakers emphasized the need for a clear reassessment of current capacities and future needs so as to minimalize the risks of potential investments in infrastructure. These investment will also require easier access to existing capital, access to newly available resources at the EU level (to spread the risk), and reduction of red tape in the process of infrastructure authorization.

POST-CONFERENCE DEVELOPMENTS

On the 30<sup>th</sup> of October 2011, the remaining Belgian federal government negotiators are said to have decided on an exit strategy away from nuclear power generation on Belgian territory. A mere few days later, Belgium's nuclear power monopolist Electrabel (GDF Suez) confirmed its plans to close three of its plants in Belgium (Tihange, Doel 1 and Doel 2) as of 2015.

The negotiating parties' intentions have thus reaffirmed the previously agreed law of 2003 that envisaged the start of phasing out nuclear power by 2015, with a last refueling in 2013.

If indeed the current negotiators succeed in forming a government, the latter shall – within a period of 6 months after kick-off – design a so-called "equipment plan" that will map options to replace the reduced power generation capacity.

It remains unclear whether the new producers are to be engaged with during or after the completion of the "equipment plan". Either way, a sense of urgency is appropriate. Phasing out of the nuclear power generation requires multi-year planning and development of replacement Indeed, the capacity. fully average start-up time for

operational gas powered plant is four years. An additional two years apply for a similar start-up of a coal powered plant.

#### **ANNEX 1: AGENDA OF THE CONFERENCE**

#### 0900- OPENING SESSION

0915h

- Welcoming remarks by **H.E. Amb. Marc TRENTESEAU**, Director General, Egmont Institute
- Framing speech by Ms. Tinne VAN DER STRAETEN, Associate, Blixt Law, Climate and Energy Law

### 0915- PANEL SESSION 1 - ELECTRICITY PRODUCTION: TOWARDS AN IDEAL ENERGY MIX FOR 1040h BELGIUM

- Introduction of the speakers by the moderator **Prof. Dr. Eric DE KEULENEER**, Solvay Brussels School of Economics, Université Libre de Bruxelles (ULB)
- Framing speech by **Prof. Dr. Jacques DE RUYCK**, Dean of the Faculty of Engineering Sciences, Vrije Universiteit Brussel (VUB)

Discussion panel and plenary discussion with the following speakers:

- Mr. Peter CLAES, General Manager of Febeliec, Federation of Belgian Industrial Energy Consumers
- Mr. Frank COENEN, CEO Belwind, CEO Northwind
- Mr. André JURRES, CEO, NPG Energy
- Mr. Paul MAERTENS, Director Corporate Affairs, SPE Luminus
- **Mr. Marc VAN BREDA**, Vice President Health, Safety, Environment, Energy Policy and Communication, BASF Belgium
- **Mr. Dominique WOITRIN**, Director of Department for Technical Working of the Markets (Electricity & Gas), CREG

### 1040 NETWORKING COFFEE BREAK

1105h 1105-

#### PANEL SESSION 2 - SMART GRIDS: THE FUTURE FOR BELGIUM?

1220h

- Introduction of subject and panelists by the moderator **Mrs. Inge BERNAERTS**, Head of Unit Electricity & Gas, Directorate-General for Energy, European Commission

Discussion panel and plenary discussion with the following speakers:

- **Mr. Per HALLBERG**, Chairman of the EURELECTRIC Working Group on Smart Grids & Senior Advisor to Vattenfall
- Mr. Hubert LEMMENS, Chief Innovation Officer, ELIA
- Mr. Patrick REYNIERS, Program Manager Smart Grids, Eandis
- Mr. Gerrit Jan SCHAEFFER, Director Energy Research, VITO

### 1220- CONCLUDING SESSION 1315h

- Introduction of the panel discussion and the speakers by the moderator, **Mr. Wim VAN DE VELDEN**, Political Editor, De Tijd
- Wrap-up speech by **Mr. Marc DEPREZ**, Senior Energy Policy Advisor, Directorate -General for Energy, Belgian Federal Public Service Economy

Panel discussion with the following speakers:

- Mr. Olivier DELEUZE, Member of the House of Representatives, Belgian Federal Parliament, ECOLO
- **Mr. Willem-Frederik SCHILTZ**, Member of the House of Representatives, Belgian Federal Parliament, Open VLD
- **Mr. Servais VERHERSTRAETEN**, Member of the House of Representatives, Belgian Federal Parliament, CD&V

Closing remarks by **H.E. Amb. Bernard PIERRE**, Training Director, FPS Foreign Affairs, Foreign Trade and Development Cooperation of Belgium



### **ANNEX 2: REGISTERED PARTICIPANTS**

- 1. **Mr. Walter Aertsens,** Energy Policy Expert, Infrabel
- **2. Ms. Marie-Charlotte Annez de Taboada,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- 3. **Mr. Geert Bens,** Vice-President in charge of energy matters, Umicore
- **4. Ms. Inge Bernaerts,** Head of Unit B.2, Electricity & Gas, Directorate-General for Energy, European Commission
- **5. Mr. Danila Bochkarev,** Fellow, EastWest Institute
- 6. Mr. Bart Bode, Director, Organisatie Duurzame Energie
- **7. Mr. Jean-François Brackman,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **8. Mr. Dirk Breuer,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- 9. Mr. Jean-Charles Carrette, Administrator, Elexys
- **10. Ms. Marie Cherchari,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **11. Mr. Guillaume Choquet,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- 12. Mr. Peter Claes, Director, Febeliec
- 13. Mr. Frank Coenen, CEO, Belwind and Northwind
- **14. Ms. Stephanie Corens,** Parliamentary Collaborator for Member of the House of Representatives Mr. Willem-Frederik Schiltz
- **15. Mr. Tom De Bruyckere,** Spokesperson, E.ON Benelux
- **16. Mr. Jeroen De Coninck,** Lawyer specialized in Environmental and Energy Law, Baker & McKenzie
- **17. Mr. Nicolas De Coster,** Energy Expert, Cabinet of the Belgian Vice Prime Minister and Minister of Work and Equal Opportunities, (H.E. Minister Joëlle Milquet)
- **18. Mr. Julien de Fraipont,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **19. Prof. Dr. Eric De Keuleneer,** Solvay Brussels School of Economics, Université Libre de Bruxelles (ULB)
- **20. H.E. Amb. Claudia De Maesschalck,** Directorate General European Affairs, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **21. Mr. Jonas De Meyer,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **22. Mr. Christophe de Nijs**, Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **Ms. Séverinede Potter de ten Broeck,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **24. Prof. Dr. Jacques De Ruyck,**Dean of the Faculty of Engineering Sciences, Vrije Universiteit Brussel (VUB)
- 25. Mrs. Cécilede Schoutheete, Expert, Fédération Inter-Environnement Wallonie
- **26. Mr. Olivier Deleuze,** Member of the House of Representatives, Belgian Federal Parliament, Ecolo
- 27. Mr. Frederik Deloof, Administrator, Team Market, BENELUX Secretariat-General
- **28. Mr. Marc Deprez,** Senior Energy Policy Advisor, Directorate General for Energy, Belgian Federal Public Service Economy
- **29. Mr. Luc Dufresne,** Secretary General, National Bank of Belgium, Chairman of the GEMIX International Expert Panel
- **30. Mr. Nicolas Fierens Gevaert,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **31. Mrs. Karen Geens,** EU Policy Coordinator, Directorate-General Energy, External Relations, Federal Public Service Economy, Kingdom of Belgium
- 32. Mr. Michel Groeneveld, Manager Public & Regulatory Affairs, E.ON Benelux
- **33. Mr. Per Hallberg,** Chairman of the EURELECTRIC Working Group on Smart Grids & Senior Advisor to Vattenfall
- 34. Mr. David Haverbeke, Partner Real Estate, Environment and Regulatory, Lydian Lawyers
- **35. Mr. Jan-Pieter Haeverbeke**, Energy Specialist, Cabinet of the Belgian Vice Prime Minister and Minister of Foreign Affairs and Institutional Reform (H.E. Minister Steven Vanackere)
- 36. Ms. Tinne Heremans, Senior Research Fellow, Egmont Institute
- 37. Ms. Barbara Heremans, Legal Counsel, CREG
- **38. Ms. Vladislava Iordanova**, Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium

- **39. Ms. Tine Jacobs,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **40. Mrs. Annabelle Jacquet,** Deputy Head of Cabinet Cell "Energy", Cabinet of the Walloon Minister for Sustainable Development, in charge of Energy (Minister Jean-Marc Nollet)
- **41. Mr. David Jordens,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- 42. Mr. André Jurres, CEO, NPG Energy
- **43. Mrs. Noémie Laumont,** Secretary General, EDORA (Fédération de l'Energie d'Origine Renouvelable et Alternative)
- **44. Mr. Hubert Lemmens,** Chief Innovation Officer, Elia
- **45. H.E. Ambassador Koenraad Lenaerts,** Director Global Issues/Energy, Directorate General Multilateral Affairs, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **46. Mr. Paul Maertens,** Director Corporate Affairs, SPE Luminus
- **47. Mr. Stanley Matthys,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **48. Ms. Marie Neyrinck,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **49. Mr. Maarten Noeninckx,** Policy Advisor, Directorate-General Energy, External Relations, Federal Public Service Economy, Kingdom of Belgium
- **50.** Mrs. Dominique Offergeld, CFO, ORES
- **51. H.E. Ambassador Bernard Pierre,** Training Director, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **52. Ms. Sandrine Platteau,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **53. Mr. Tom Pollyn,** Country Manager Belgium, SolarAccess
- **54. Ms. Gaëlle Powis de Tenbossche,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **55. Mr. Laurent Preud'homme,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **56. Mr. Patrick Reyniers,** Program Manager Smart Grids, Eandis
- 57. Mr. Gerrit Jan Schaeffer, Director Energy Research, VITO
- **58. Mr. Jan Schaerlaekens,** Advisor, Cabinet of the Flemish Minister of Energy, Housing, Cities and Social Economy (H.E. Minister Freya Van den Bossche)
- **59. Mr. Willem-Frederik Schiltz,** Member of the House of Representatives, Belgian Federal Parliament, Open VLD
- **Mrs. Maria-Antoinetta Simons,** Responsible for energy matters, Permanent Representation of Belgium to the European Union, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **61. Mr. Benjamin Sturtewagen,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **62. H.E. Ambassador Marc Trenteseau,** Director General, Egmont Institute
- **63. Mr. Marc Van Breda,** Vice President Health, Safety, Environment, Energy Policy and Communication, BASF Belgium
- **64. Mr. Wim Van de Velden,** Editor, De Tijd
- **65. Mr. Charles-Idesbald van der Gracht de Rommerswael,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **66. Ms. Tinne Van der Straeten,** Associate, Blixt Law, Climate and Energy Law
- 67. Ms. Sara Van Dyck, Policy Officer, Bond Beter Leefmilieu Vlaanderen
- **68. Mr. Luc Van Nuffel,** Head of Regulatory Affairs, Electrabel
- **69. Mr. Pierre Van Overstraeten,** Collaborator Training Program for Diplomats and Development Cooperation Agent, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- 70. Mr. Johan Vanbrabant, Expert in Sustainability, Accenture
- **71. Mr. Sven Vaneycken,** Energy Expert, Cabinet of the Belgian Vice Prime Minister and Minister of Foreign Affairs and Institutional Reform (H.E. Minister Steven Vanackere)
- **72. Ms. Charlotte Vangrunderbeek,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium
- **73. Mr. Servais Verherstraeten,** Member of the House of Representatives, Belgian Federal Parliament, CD&V
- **74. Mr. Vincent Viaene,** Diplomat Trainee, Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium

