

2014 IERE - GDF SUEZ Brussels Workshop “Energy at home”

Program

June 3 (Tuesday) – June 6 (Friday), 2014

Brussels, Belgium

Organized by:

IERE and GDF SUEZ



City Hall of Brussels (Hotel de Ville de Bruxelles)

Outline Schedule:

Main Venue: “The Arc” auditoria of SQUARE BRUSSELS MEETING CENTER

Tuesday – 3 June 2014

Registration and Welcome Reception / Cocktail in “City Hall of Brussels”, room “Gotische Zaal / Salle Gothique”

Wednesday 4 June 2014 – Thursday 5 June 2014

The 2014 IERE - GDF SUEZ Brussels Workshop “Energy at home”

Friday 6 June

Technical visits (optional)

General Theme: Energy at home

Strong technology development in distributed generation and the development of ICT-based smart solutions for monitoring and managing energy consumption are fundamentally changing the old paradigms in the energy business. The power system is evolving from mainly centralized generation towards more distributed generation. And at the same time, the demand side in the system, which used to be mainly passive, is becoming much more actively involved in managing consumption and even in system management.

With massive amounts of intermittent renewable power generation coming on line, instead of adapting supply to demand, demand will have to adapt to some extent to the availability of supply. At the same time, energy efficiency regulations call for ever increasing energy performance levels in buildings. Therefore a significant change may be expected in the way consumers use, manage and generate their energy at home, and clearly the residential customer plays a central role.

This IERE-GDF SUEZ workshop on “Energy at home” will focus on the new technologies, envisioned developments and gained experience related to energy use, energy management and generation “at home”. The changes enabled by these developments have a global significance and will impact generation, transmission & distribution as well as supply. They have the potential to challenge the traditional business models of utilities and attract new players to enter the energy markets.

With this workshop, IERE hopes to contribute to improved understanding and exchange on this strategic topic.

Program

June 3(Tue):

**Venue: The City Hall of Brussels (Hotel de Ville de Bruxelles),
room “Gotische Zaal / Salle Gothique” (First floor)**

19:00-22:00 Registration and Welcome Reception / Cocktail

Map: <http://goo.gl/gt2iJz>

Day 1

Venue : SQUARE BRUSSELS MEETING CENTRE

June 4(Wed): Auditoria- “The Arc” (Level +3)

08:00-09:00 Registration

Opening Session

09:00-09:15 O-1 “Welcome Address” by Mr. Leon Duvivier, Technology Director of the Direction Research & Technology (GDF SUEZ, France)

09:15-09:30 O-2 “Opening Speech” by Dr. Rolando Nieva, Chair of IERE (IIE, Mexico)

Keynote Addresses

09:30-10:00 O-3 “Photovoltaics: Status and Vision”, Prof. J. Poortmans, Program Director PV (IMEC, Belgium)

10:00-10:30 O-4 “Energy saving and DSM demonstration activities in Japan”
by Dr. Hiromu Kobayashi, Senior Research Scientist, System Engineering Research Laboratory (CRIEPI, Japan)

Summary Report on the First Prototype Technology Leader Meeting (TLM)

10:30-11:00 by Dr. Bart Boesmans, Executive Member of IERE (GDF SUEZ, Belgium)

11:00-11:15 Coffee Break

Session 1: Distributed Generation

Chair: Dr. Aidan Tuohy, Executive Member of IERE (EPRI, USA)

11:15-11:45 S1-1 “New developments in Building-Integrated Wind Turbines”
by Mr. Jochem Vermeir (Vrije Universiteit Brussel, Belgium)

11:45-12:15 S1-2 “Water injection in a micro gas turbine for combined heat and power application” by Prof. Svend Bram (Vrije Universiteit Brussel, Belgium)

12:15-12:45 S1-3 “Micro cogeneration systems using natural gas: towards a smart solution !” by Mr. David Dupuis (GDF SUEZ, CRIGEN, France)

12:45 -14:00 Lunch (complimentary stand-up meal and beverage are available)

Special Address

14:00-14:15 by Mr. Raphael Schoentgen, Research & Technology Director, Member of the Executive Committee (GDF SUEZ, France)

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Session 2: Distributed Electricity Storage

Chair: Dr. Gaétan Lantagne, Treasurer of IERE (Hydro-Québec, Canada)

14:15-14:45 S2-1 “Application and Economics of Stationary Storage”
by Mr. Friedrich Schulte (RWE AG, Germany)

14:45-15:15 S2-2 “Development of a Short Term Power Interruption Compensator using Lithium-ion Capacitors”
by Mr. Mitsutoshi Asano (Chubu EPCO, Japan)

15:15-15:45 S2-3 “Micro Energy Storage in Buildings”
by Mr. Guilherme Oliveira e Silva (ULB, Belgium)

15:45-16:00 Coffee Break

Session 3: Energy Efficiency - (Semi-) Autonomous Houses

Chair: Mr. Friedrich Schulte, Board Member of IERE (RWE AG, Germany)

16:00-16:30 S3-1 “HEMS Control Technology for Self-power Operating House in Disaster” by Mr. Tadayoshi Kosaka (Hitachi Ltd., Japan)

16:30-17:00 S3-2 “Energy at home: Enel Research projects and experiences”
by Dr. Sandra Scalari (ENEL, Italy)

17:00-17:30 S3-3 “New Efficient Gas Solutions and Renewable Energies Coupling for Low Energy Residential Buildings in France”
by Dr. Cristian Muresan (CRIGEN - GDF SUEZ, France)

19:00-22:30 **Dinner hosted by GDF SUEZ in “Magritte Museum”**

**Including free visit (about 1 hour) of the Museum.

All participants of the IERE-GDF SUEZ Workshop are invited to the “Magritte Museum”.

Opened in June, 2009, the Magritte Museum displays works of the surrealist artist for which it is named. Located in the heart of Brussels at the Place Royale, the museum is housed in the neo-classical landmark Altenloh Hotel, superbly restored in 1984 with the generous support of the Franco-Belgian group GDF SUEZ and the Magritte Foundation, and operates as part of the Royal Museums of Fine Arts of Belgium. Instantly popular, the museum welcomed over 500,000 visitors in its first year of operation.

(www.musee-magritte-museum.be) / Map: <http://goo.gl/TgF9Tx>

Day 2

June 5(Thu): Auditoria- “The Arc” (Level +3)

08:30-09:00 Registration

Keynote Address

Chair: Mr. Roger Ballay, Advising Chair Emeritus of IERE (France)

09:00-09:30 “The Retail (R)evolution – Power to the Customer” by Mr. Sébastien DOLIGÉ, Advisor, Retail Customers & Markets Units (EURELECTRIC, Belgium)

Session 4: “Smart” Home Automation Systems and Demand Side Management

Chair: Dr. John W M Cheng, Executive Member of IERE (CLPRI, Hong Kong)

- 09:30-10:00 S4-1 “PowerFlexhouse research laboratory for smart energy management”
by Dr. Anna Kosek (TDU: Technical Univ. of Denmark, Denmark)
- 10:00-10:30 S4-2 “Smart Grid and New Metering Technology for Smarter Energy
Management” by Mr. Takashi Yoshida (Kansai EPCO, Japan)
- 10:30-11:00 S4-3 “The Linear residential demand response pilot: balancing wind energy
with residential flexibility” by Dr. Koen Vanthournout (VITO,
Belgium) and Ir. Rafael Jahn (Loborelec, GDF SUEZ, Belgium)
- 11:00-11:15 Coffee Break
- 11:15-11:45 S4-4 “The electric vehicle: an asset for the electrically autonomous house ?”
by Dr. Laurent DeVroey (Loborelec, GDF SUEZ, Belgium)
- 11:45-12:15 S4-5 “Imbalance reduction of a Virtual Power Plant in a field test with 150
heat pumps” by Dr. Olaf van Pruissen (TNO, Netherlands)
- 12:15-12:45 S4-6 “The potential of active demand response with residential wet
appliances in Belgium” by Wouter Labeeuw (KU Leuven
ESAT-ELECTA, Belgium)
- 12:45-13:15 S4-7 “Flexibility Requirement in Future Energy Supply”
by Dr. Gunner Hoffmann (RWE AG, Germany)
- 13:15 -14:30 Lunch (complimentary stand-up meal and beverage are available)

Session 5: Metering, Verification and Data Management for Smart Energy at Home

Chair: Dr. Giancarlo Benelli, Board Member of IERE (Enel, Italy)

- 14:30-15:00 S5-1 “Towards the smart home: a tool to assess the flexibility potential of
tailor-made realistic dwellings” by Dr. Cathy Crunelle (Loborelec,
GDF-SUEZ, Belgium)
- 15:00-15:30 S5-2 “Precision Power Measurements of Renewable Energy Sources”
by Mr. Ben Kemink (Yokogawa Europe B.V., Netherlands)
- 15:30 -15:45 Coffee Break

Session 6: Intermittency Management

Chair: Dr. Bart Boesmans, Executive Member of IERE (GDF SUEZ, Belgium)

- 15:45-16:15 S6-1 “Assessing the Flexibility of Power Systems to Manage Variability and
Uncertainty Due to Wind and Solar Power”
by Dr. Aidan Tuohy (EPRI, USA)

Closing Remarks

- 16:15-16:45 Chaired by Dr. Bart Boesmans, Executive Member of IERE, Managing
Director Loborelec, Deputy Manager of the Research & Innovation
Division (GDF SUEZ, Belgium)

Day 3

June 6(Fri): Technical visits (optional)

Drogenbos Power Plant + “Living Tomorrow” + Laborelec

- Drogenbos Power Plant : combined-cycle gas turbine plant of 540 MW (Electrabel / GDF SUEZ)
- « Living Tomorrow » : The tour gives you an insight on the development of innovations and the way in which companies innovate successfully, i.e. how companies successfully launch a product or service. How concepts are realized. Which trends play. What the role of the consumer is. (<http://livingtomorrow.com/en/>)
- Laborelec : the technical competence centre in electrical power and energy technology. Research and operational assistance helps improve the flexibility, reliability, efficiency, sustainability, and cost-effectiveness of energy technologies in generation, transmission and distribution, and energy end-use (www.laborelec.be)

Timeline(subject to change):

08:30	Start from Brussels
*Meeting place:	Brussels Central Station / Gare de Bruxelles- Central
09:30 - 10:30	Visit of Living Tomorrow
11:00 - 12:30	Visit of Drogenbos
12:30 - 14:30	Lunch
14:30 - 16:30	Visit of Laborelec
Around 17:00	Arrival in Brussels

Information

Venue

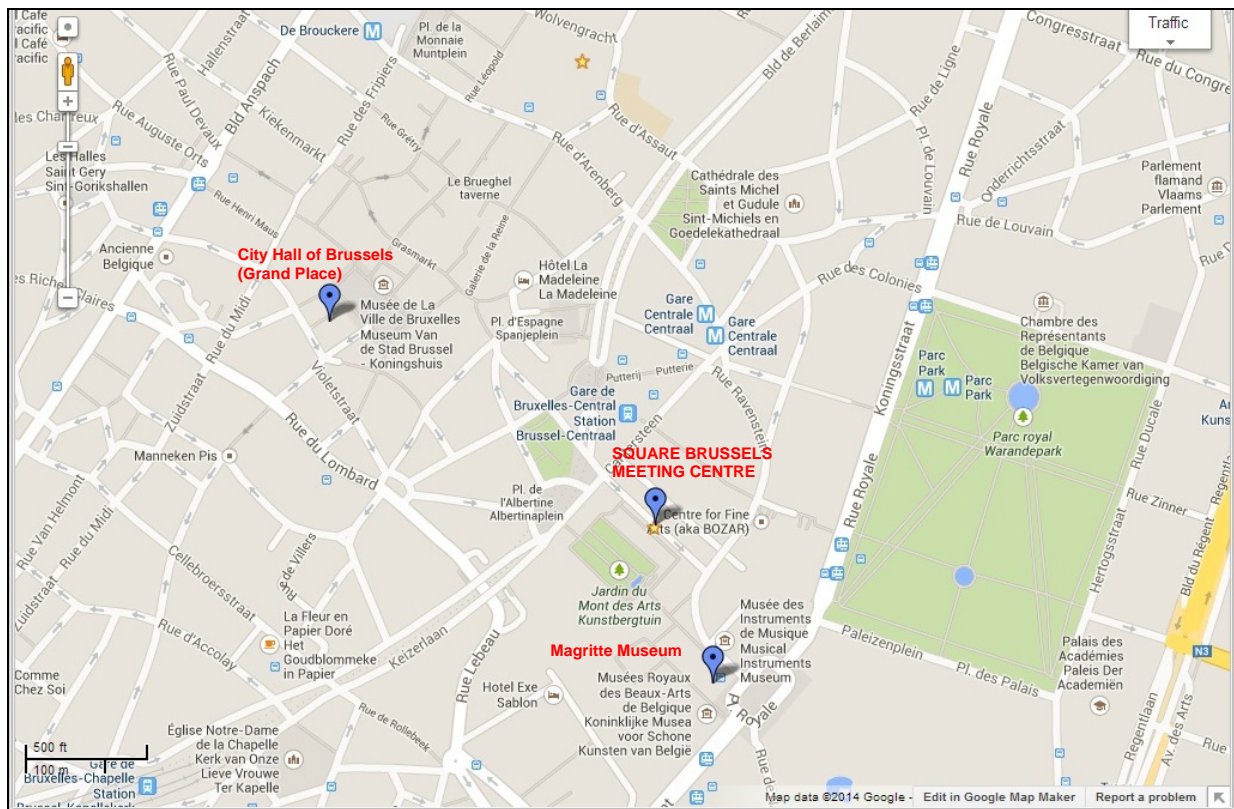
Conference Venue

SQUARE BRUSSELS MEETING CENTRE

Rue Coudenberg, B-1000 Brussels, Belgium

This center is located in the heart of Brussels and is easy to reach from the international airport and from the main railway stations.

URL: <http://www.squarebrussels.com/square-brussels-brussels-meeting-center>



Map URL: <http://goo.gl/VDfWXm>



As performed

About GDF SUEZ

GDF SUEZ develops its businesses (power, natural gas, energy services) around a model based on responsible growth to take up today's major energy and environmental challenges: meeting energy needs, ensuring the security of supply, fighting against climate change and maximizing the use of resources.

The Group provides highly efficient and innovative solutions to individuals, cities and businesses by relying on diversified gas-supply sources, flexible and low-emission power generation as well as unique expertise in four key sectors: independent power production, liquefied natural gas, renewable energy and energy efficiency services.

GDF SUEZ employs 138,200 people worldwide and achieved revenues of €82 billion in 2012.

GDF SUEZ is also the main shareholder of SUEZ Environnement, an expert in water and waste management.

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