

Développement en Europe de la cogénération basse tension

Conditions et perspectives

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ATEE, Journée cogénération basse tension
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COGEN

EUROPE The European Association
For the Promotion of Cogeneration

Agenda

- Quelques mots sur COGEN Europe
- Le marché européen de la cogénération
- Le marché de la micro/mini cogé dans une sélection de pays
- Feuille de Route CODE2 pour la micro-cogén
- Conditions pour l'avancement du secteur
- Cadre législatif communautaire impactant la micro/mini-cogénération
- Conclusions

COGEN Europe

Who we are

Structure

- European trade association for the promotion of cogeneration
- COGEN Europe was established in 1993 and is headquartered in Brussels
- The secretariat employs currently 6 people

We have a vision

- Through the promotion of cogeneration, to grow an industry which changes the way Europe provides heat and electricity for a sustainable future

Our approach is

- On behalf of our members (60+) we promote the wider use of cogeneration as part of Europe's sustainable energy strategy
- For this purpose we participate in the EU legislative process and meet with key actors in the European Commission and European Parliament
- We work closely together with other stakeholders (see next slide)
- We further our visibility through good working relations with Brussels-based and sector media/press (EurActiv, European Voice, COSPP)

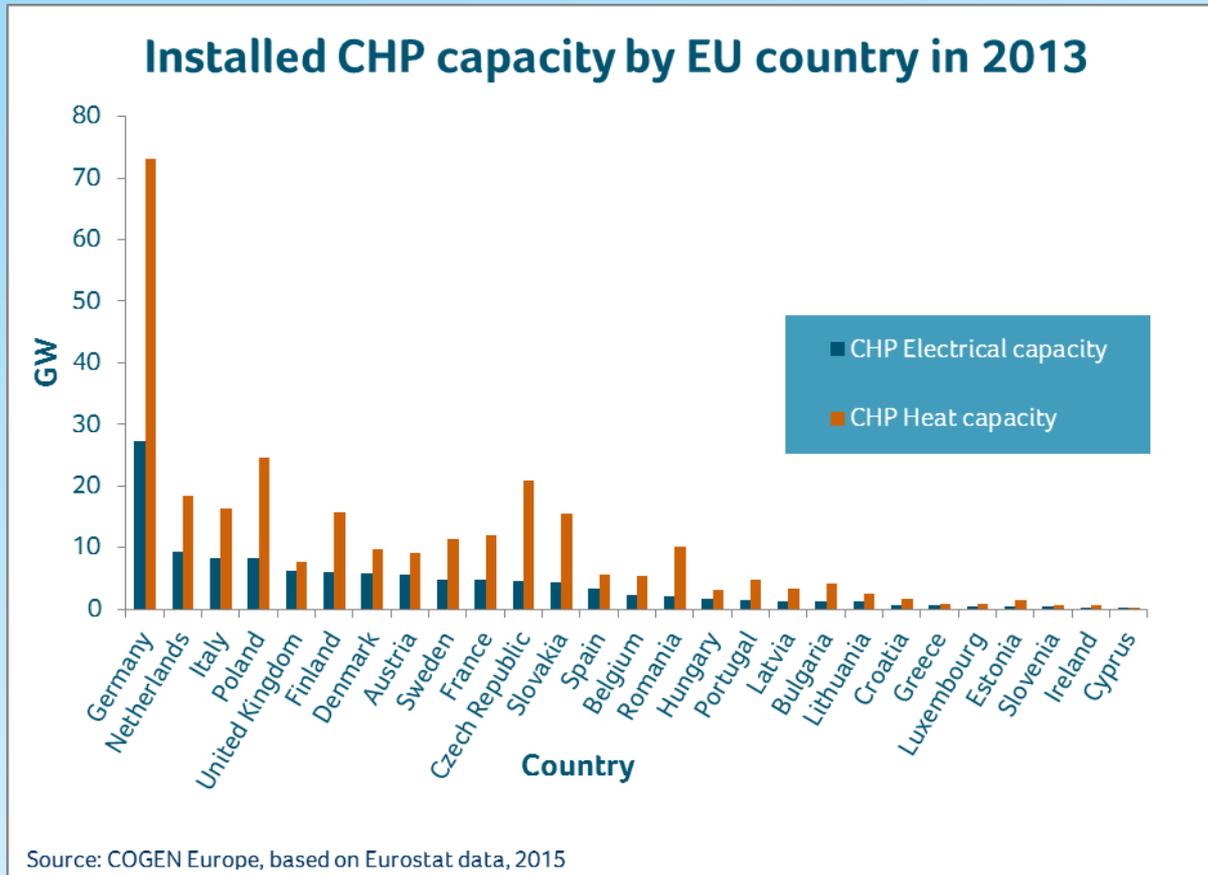
What we do

- Regular liaison and bilateral discussions with the relevant Commission Directorates-General and staff, including DG Energy, DG Climate Action, DG Environment, DG Research and DG Enterprise;
- A network of links with key Members of European Parliament (MEPs) and by following the work of relevant EP Committees, such as ITRE and ENVI;
- Cooperation and close liaison with other key industry associations (CEPI, CEFIC, FoodDrinkEurope, CEWEP, FuelsEurope, Cerame-Unie, EuroHeat & Power, EHI), renewable associations (EREC, AEBIOM, EREF, EUBIA, EGEC) and city representations (Energy Cities, Covenant of Mayors);
- A set of active internal working groups which formulate and propose COGEN Europe's policy on key topics (e.g. on Energy Efficiency Directive, electricity Network Codes, micro-CHP, bio-energy CHP and on Industrial Emissions Directive);
- European co-funded projects (CODE2 and Ene.field);
- Regular events such as our Annual Conference, EP dinner debates and others.

Marché européen de la cogénération

Marché européen de la cogénération

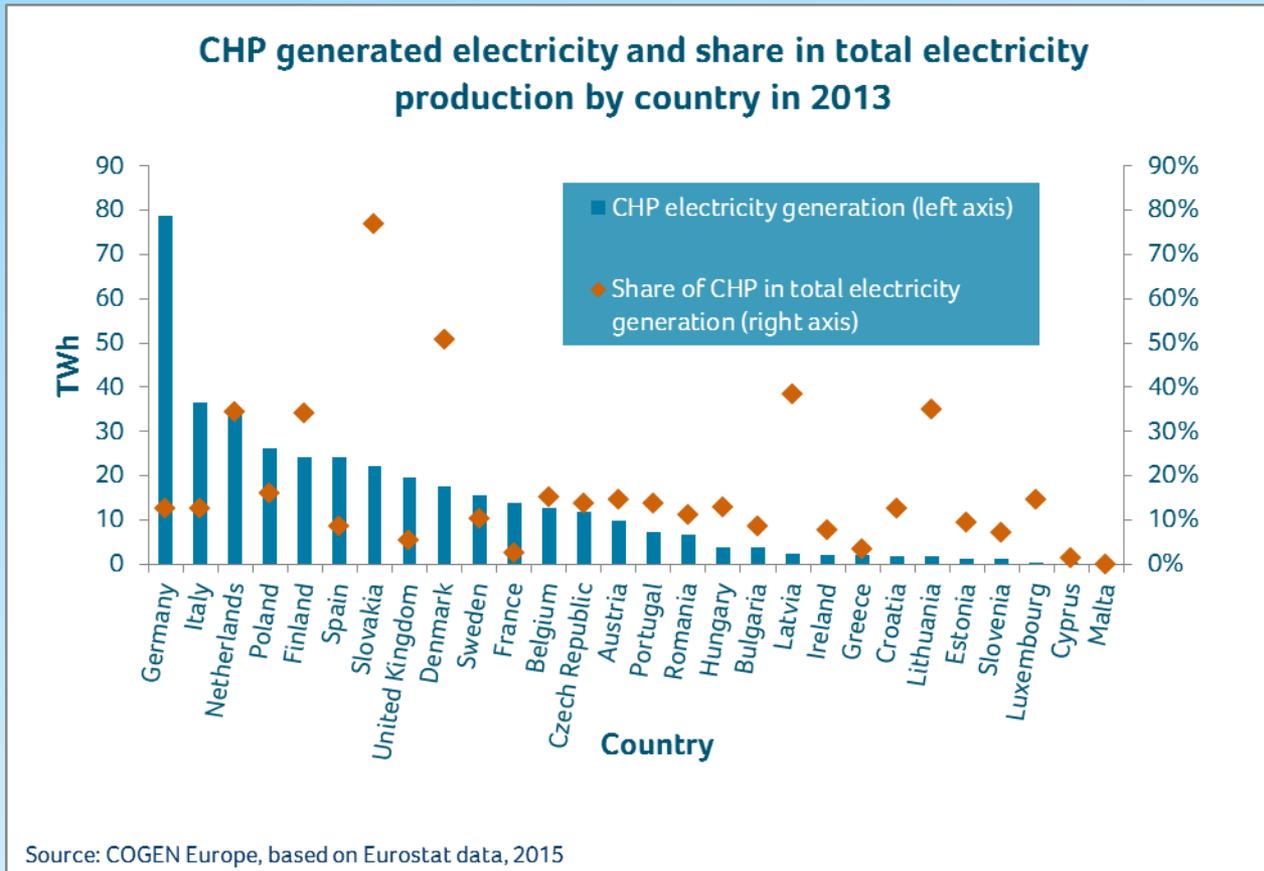
Puissance installée



Source: Eurostats, 2015

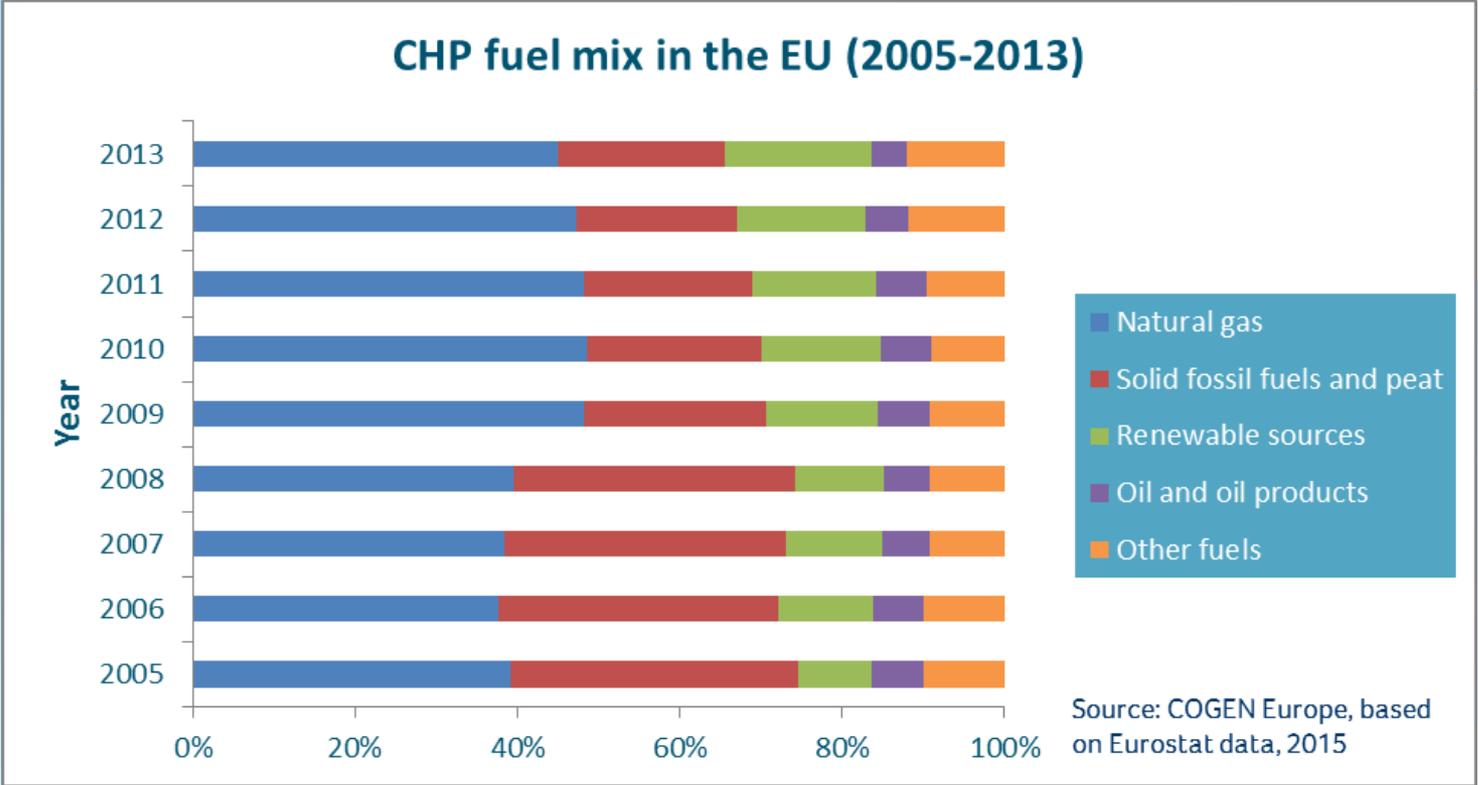
Marché européen de la cogénération

Production d'électricité



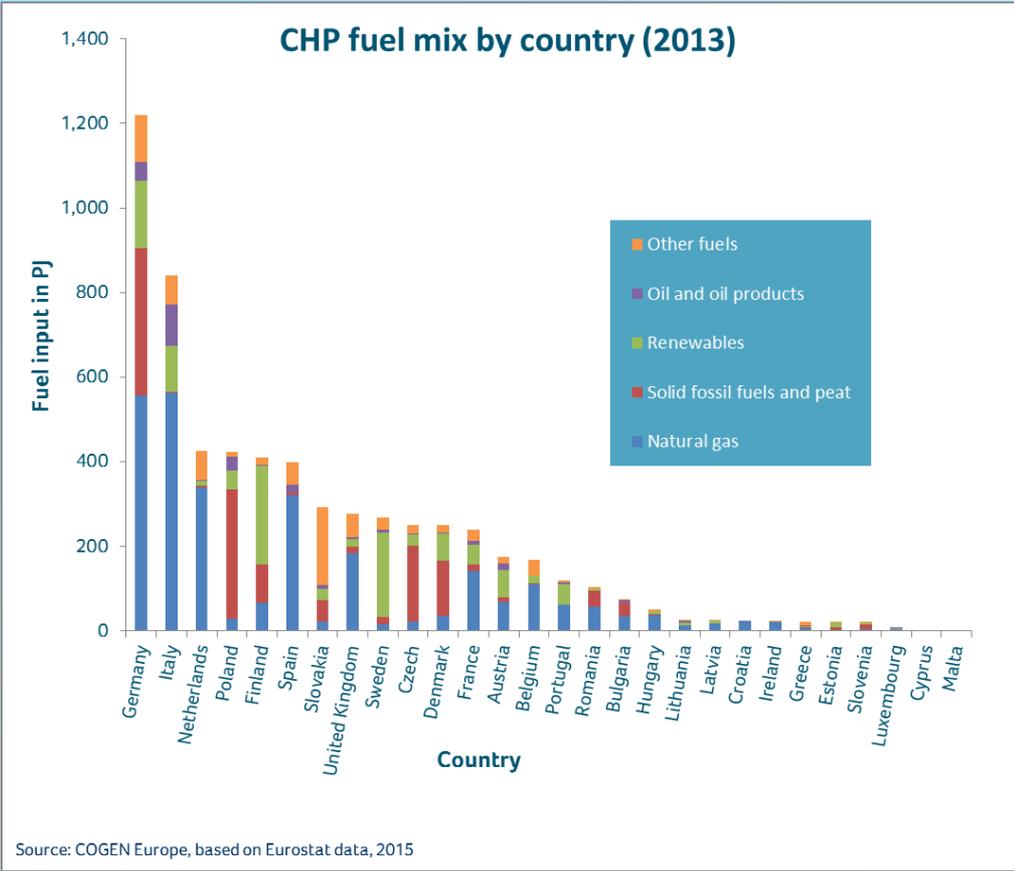
Source: Eurostats, 2015

Marché européen de la cogénération mix énergétique



Source: Eurostats, 2015

Marché européen de la cogénération mix énergétique



Source: Eurostats, 2015

Le marché de la cogénération basse tension dans une sélection de pays

Expert contributions from **17** National Associations...



2015 Cogeneration National Snapshot Survey

...representing **86%** of installed capacity in **EU28 & Turkey**

...capturing the **European CHP industry sentiment**

Launched every year during COGEN Europe Annual Conference (this year on 22-23 March, in Brussels)!

Micro/mini-cogén en Europe

- Mini-cogénération
 - **Tendance à la hausse** dans la majorité des marchés européens
 - Filières: PME, serres/agriculture, secteur hôtelier, établissements hospitaliers
 - Facteurs favorables: conditions propices dans le marché d'énergie (on-site spark spreads), cadre législatif favorable, forte sensibilisation parmi les PME
- Micro-cogénération
 - **Croissance dans certains pays européens**
 - Développement lié au support public et sensibilisation de la population

Micro/mini-cogén en Europe

La mini-cogén est en hausse dans la majorité des marchés européens

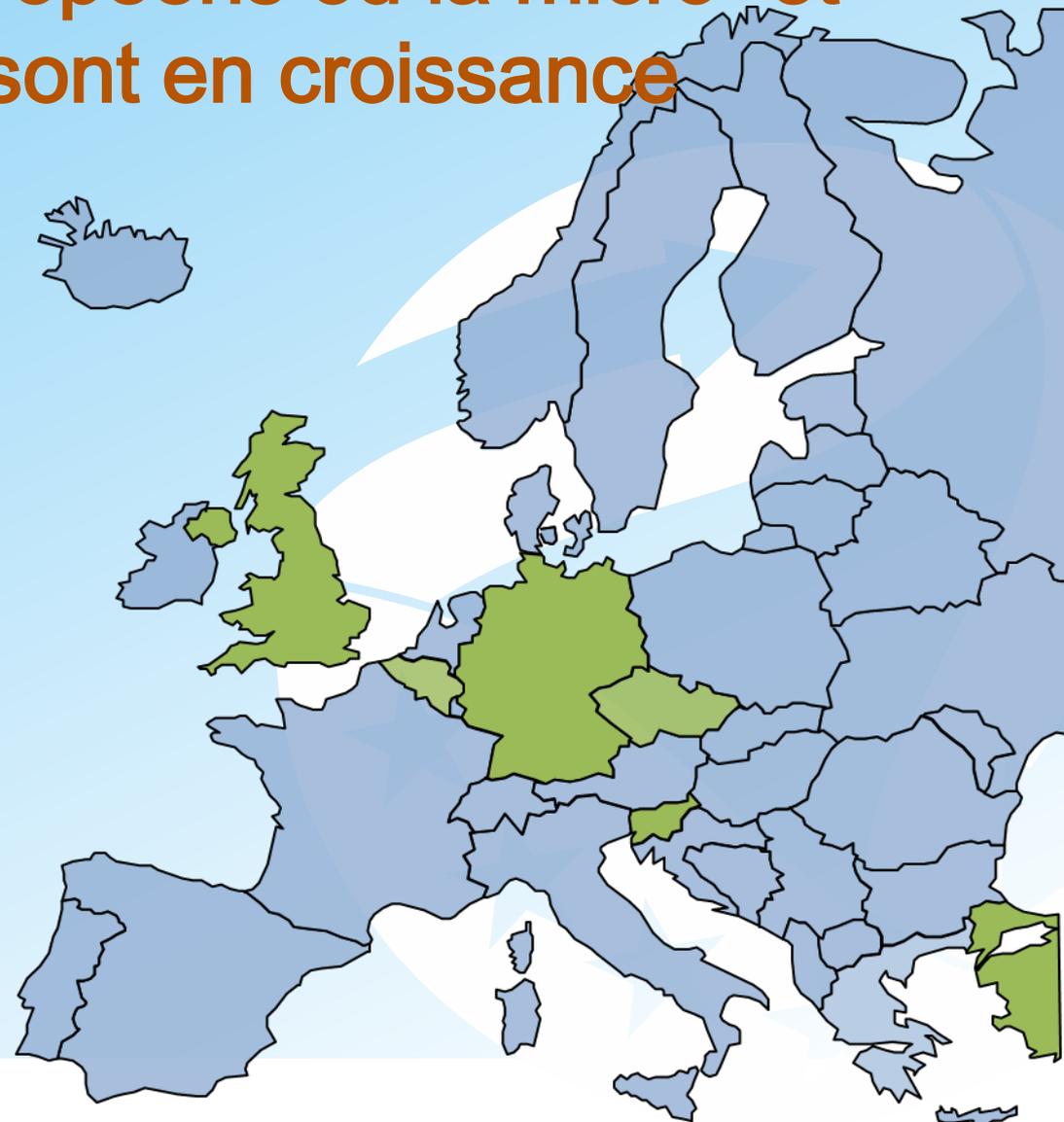
47%

52%

Faible croissance dans la filière micro-cogén/domestique, concentrée en Allemagne, Royaume Unis, Belgique

Source: COGEN Europe Snapshot Survey, 2015

Les marchés européens où la micro- et mini-cogén sont en croissance



Source: COGEN Europe Snapshot Survey, 2015

Les marchés européens où la micro- et mini-cogén sont en croissance

- Nouveau **Loi Cogén en 2016** → objectifs pour l' électricité provenant de cogén **110Twh (2020) ; 120 Twh (2025)**
- Bonus pour la micro-cogén de 4 – 5,41 c/kWh pour 10 ans/60.000 foh
- Bonus pour la mini-cogén de 1,5 – 3 c/kWh pour 10 ans
- Soutien à l'investissement pour micro-cogén (<20 kWe) compris entre 1.425 – 3.325 €/unité
- Programme de support pour le développement des **piles à combustible** via Callux/nouveau engagement de € 500 M

Source: COGEN Europe, 2015

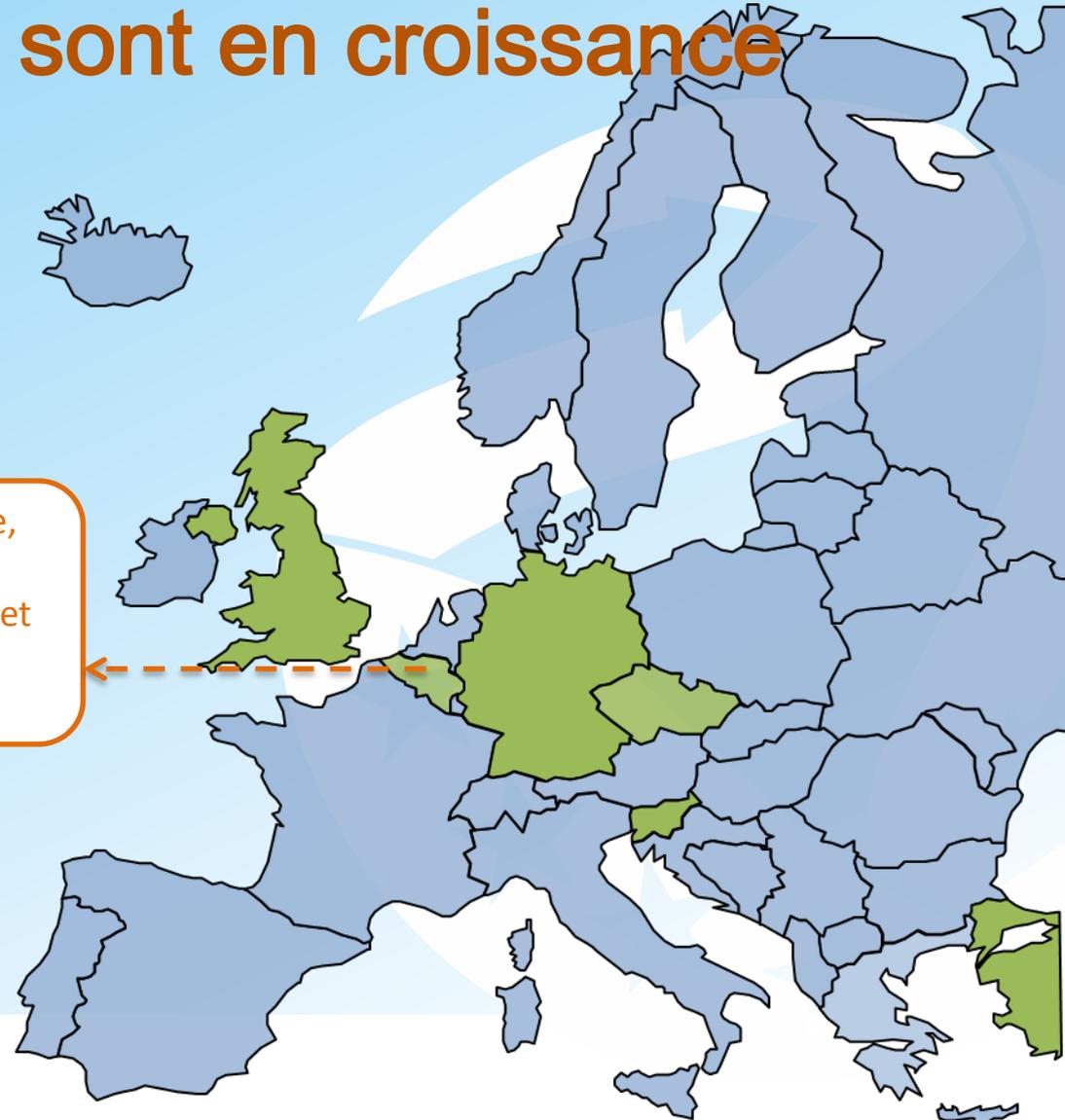
Les marchés européens où la micro- et mini-cogén sont en croissance

- Croissance de 50-100 MWe par an pour le mini-cogén
- Déduction fiscale pour les autoconsommations
- Tarif d'achat micro-cogén (<2 kWe) – sous consultation publique

Source: COGEN Europe, 2014

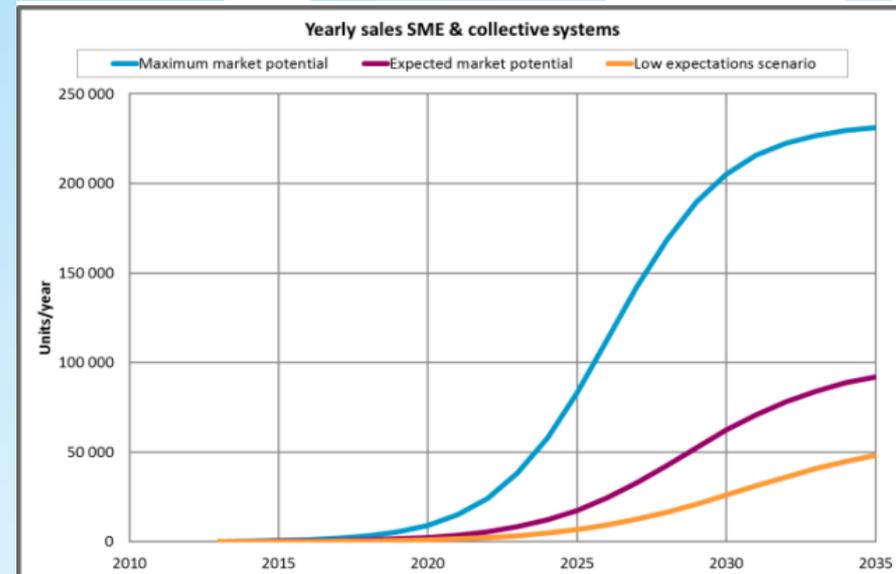
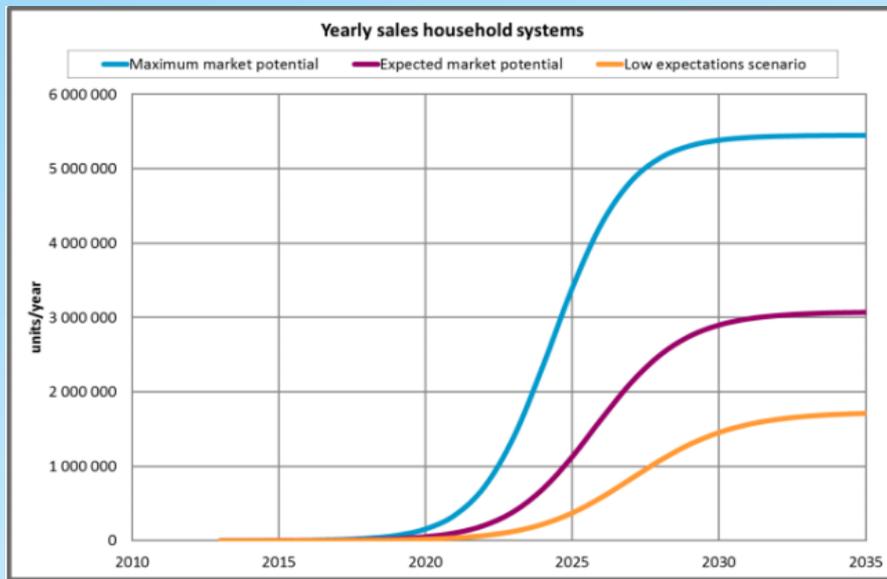
Les marchés européens où la micro- et mini-cogén sont en croissance

- Système des certificats verts en Flandre, Wallonie et Bruxelles
- Soutien à l'investissement en Wallonie et Bruxelles



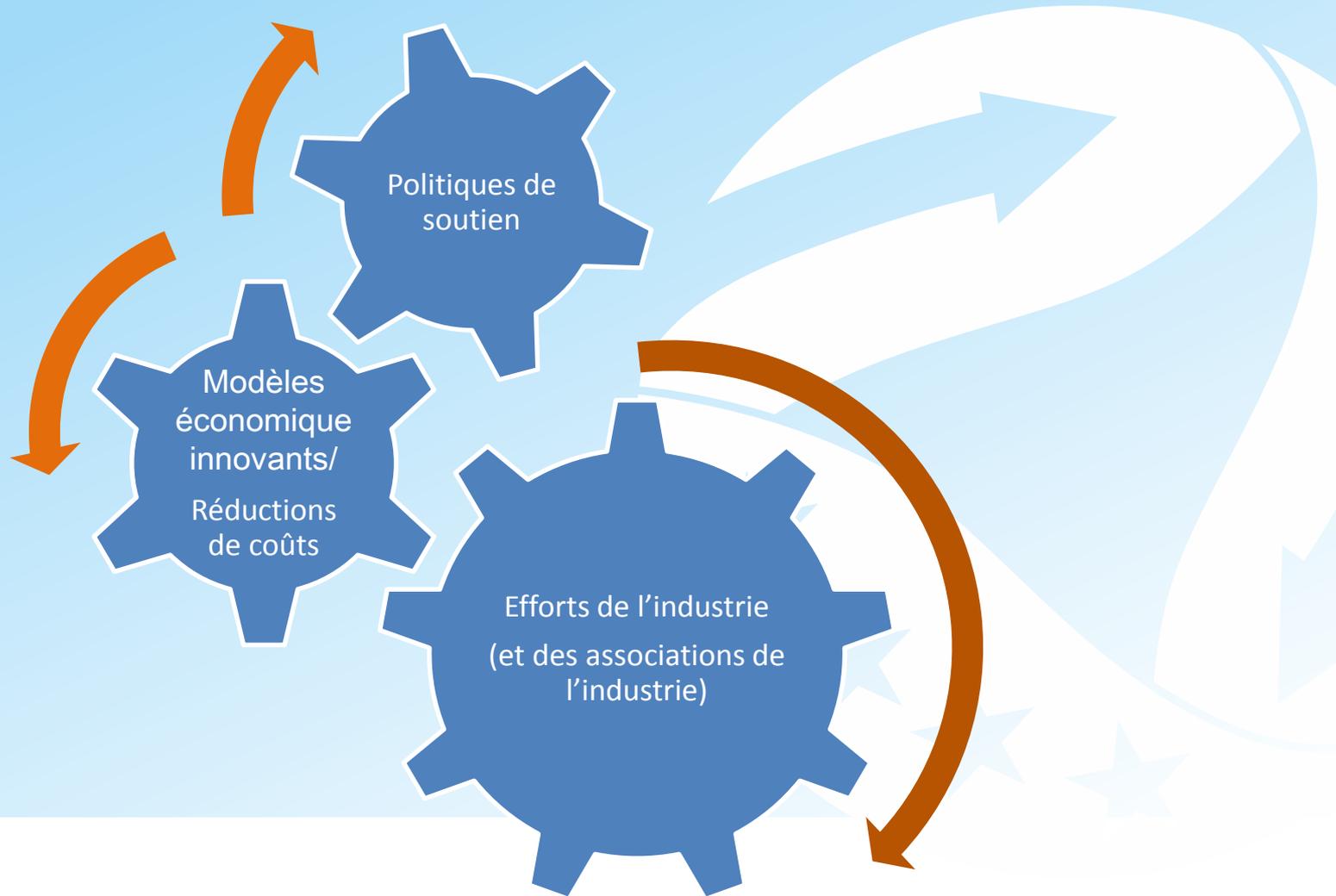
Source: COGEN Europe, 2014

Feuille de Route CODE2 pour la micro/mini-cogén



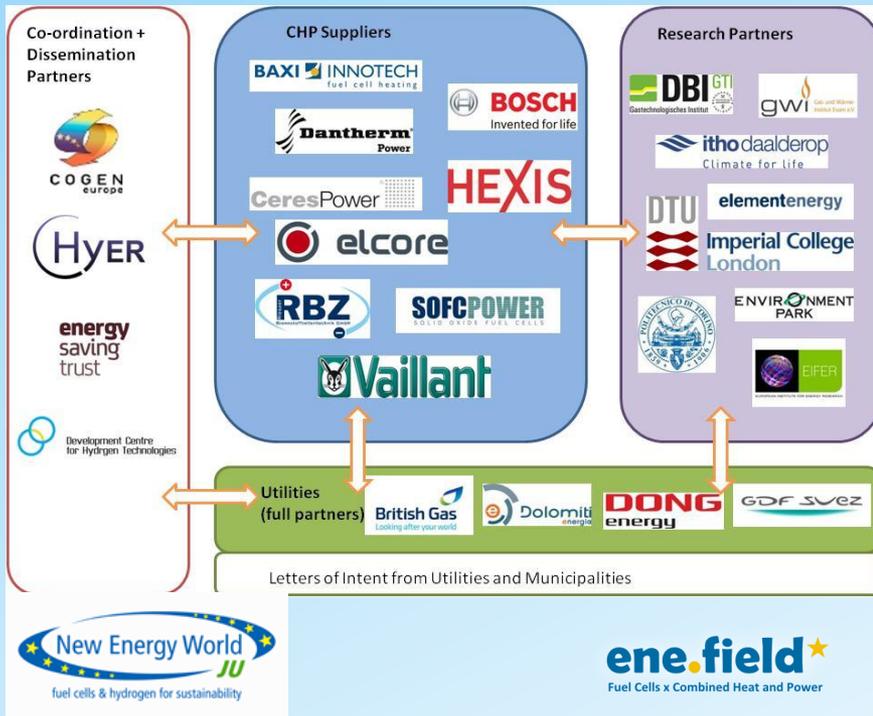
Source: [CODE2](#), 2014

Conditions pour l'avancement du secteur



ene.field

Partenariat industries-UE



- Project co-financed by the FCH JU
- Industry-wide involvement
- Aims to deploy and monitor up to 1000 fuel cell micro-CHP units across Europe by 2017
- Lifecycle cost assessment, barriers report, commercialisation framework

Modèle économique innovant de Remeha

- Rental fee on a monthly basis for 12 years
- Net costs per month €34,-
- Upfront payment (€2000,-) fully covered by subsidy
- After 12 years all savings are for enduser, total savings of enduser after 15 years for an average dwelling: €1100,-

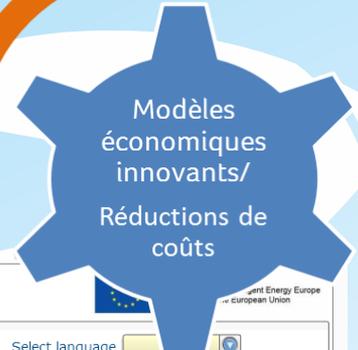
Efforts de l'industrie
(et des associations de l'industrie)



The screenshot shows the website for Remeha eVita. At the top, there is a navigation menu with links: HA EVITA, HUURCONCEPT, EVITA MATCH, CONTACT, OFFERTE AANVRAAG, and FAQ. Below the menu, there are social media icons for Twitter and Facebook. The main content area features a large circular graphic with the text "Te huur vanaf €33,95 NETTO P.M.*". Below this, the product name "Remeha eVita" is displayed, followed by the tagline "Dé slimme ketel waar je energie van krijgt!". A small cartoon character is shown next to a boiler. Below the tagline, there is a short paragraph in Dutch: "De Remeha eVita is de eerste cv-ketel ter wereld die naast warmte en warm water ook groene stroom kan opwekken! Wat ga jij doen met 2500 kWh groene stroom per jaar? [Lees meer >](#)". At the bottom of the page, there is a footer with four icons and labels: a Euro symbol for "eVita Match", a lightbulb for "Huurconcept", a document for "Offerte", and a smartphone for "Contact".

Source: <http://www.deslimsteketel.nl/#remeha-evita>

CODE2: L'outil SmartCHP pour PME



Understand CHP and start Smart | Set energy prices and spin | Results page | Disclaimer

Co-funded by the Intelligent Energy Europe Programme of the European Union

Open quick guide | Select language

CODE2

SmartCHP - Spin your CHP!

Co-generation or Combined Heat and Power (CHP) is the simultaneous generation of thermal energy and electricity or mechanical energy by using fossil or renewable fuels, most often natural gas, coal or wood biomass and biogas. CHP saves energy due to the simultaneous production of electricity and heat on-site and thereby preventing major losses that occur at most central electricity production facilities nowadays.

With the **SmartCHP tool** you can make a pre-assessment of the profitability of a CHP unit in your situation. CHPs ranging between 1 kWe and 5 MWe can be assessed.

In order to do so you can set your energy demand on the bottom left side of this page. In the right box on this page you can see which CHP unit we advise as most promising in your situation.

Hereafter in the "Set energy prices and spin your CHP" tab you can set energy prices and change parameters of the CHP unit to make a better fit of your situation or see what changes in parameters do for the profitability of a CHP unit. On this page we work with a traffic light (red = CHP probably not interesting; orange = CHP might be interesting; green = CHP interesting).

On the result page the most important parameters are summarized and here you can print or save your results.

Set your energy demand

Electricity MWh/a

Heat MWh/a

Thermal profile

CHP unit parameters

Electrical capacity	#N/A	kW ele
Heat capacity	#N/A	kW he
Operation hours	#N/A	h/a
Investment cost	#N/A	k€

CODE2 - COGENERATION OBSERVATORY AND DISSEMINATI

Understand CHP and start Smart | Set energy prices and spin | Results page | Disclaimer

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Print/save | **SmartCHP - Spin your CHP!**

Set energy prices and economic parameters

Price of fuel €/MWh

Price of electricity €/MWhEl

Value of heat €/MWhH

CHP Electricity support €/MWhEl

Investment support k€

Discount rate

Economic period years

Electrical capacity #N/ kW

Operation hours #N/A h/a

Investment cost #N/ k€

Performance indicators

Profitability CHP

Economic indicators:

Net investment	#N/A	EUR
Profit	#N/A	EUR/a
NPV	#N/A	EUR
Simple pay back	#N/A	years
IRR	#VALUE!	%

Sustainability indicators:

CHP efficiency	#N/A	%
PES	#N/A	€/MWh
CO2 savings	#N/A	tCO2/a

Costs and revenues

CODE2 - COGENERATION OBSERVATORY AND DISSEMINATION EUROPE

Cadre législatif communautaire impactant la micro/mini-cogénération



Politiques de soutien

- Energy Efficiency Directive
- Heating & Cooling Strategy
- European Network Codes
- Electricity Market Design
- Review of the EU Primary Energy Factor
- Energy Labelling Directive Review
- Energy Performance of Buildings Directive



Energy Efficiency Directive (EED)

- EED national implementation
- Ensure that micro/mini-CHP are included in the Comprehensive Assessments
- micro/mini-CHP promotion via **energy audits in businesses**
- Simplified grid connection for micro-CHP

Heating & Cooling Strategy

- Commission to publish H&C Strategy on 10 Feb
- Will make proposals on how to **improve efficiency and decarbonise H&C in EU**
- CHP one of the key technologies

Electricity Market Design

- Commission to make policy proposals in Autumn 2016
- Focus on **promoting flexible generation solutions to better integrate intermittent RES**

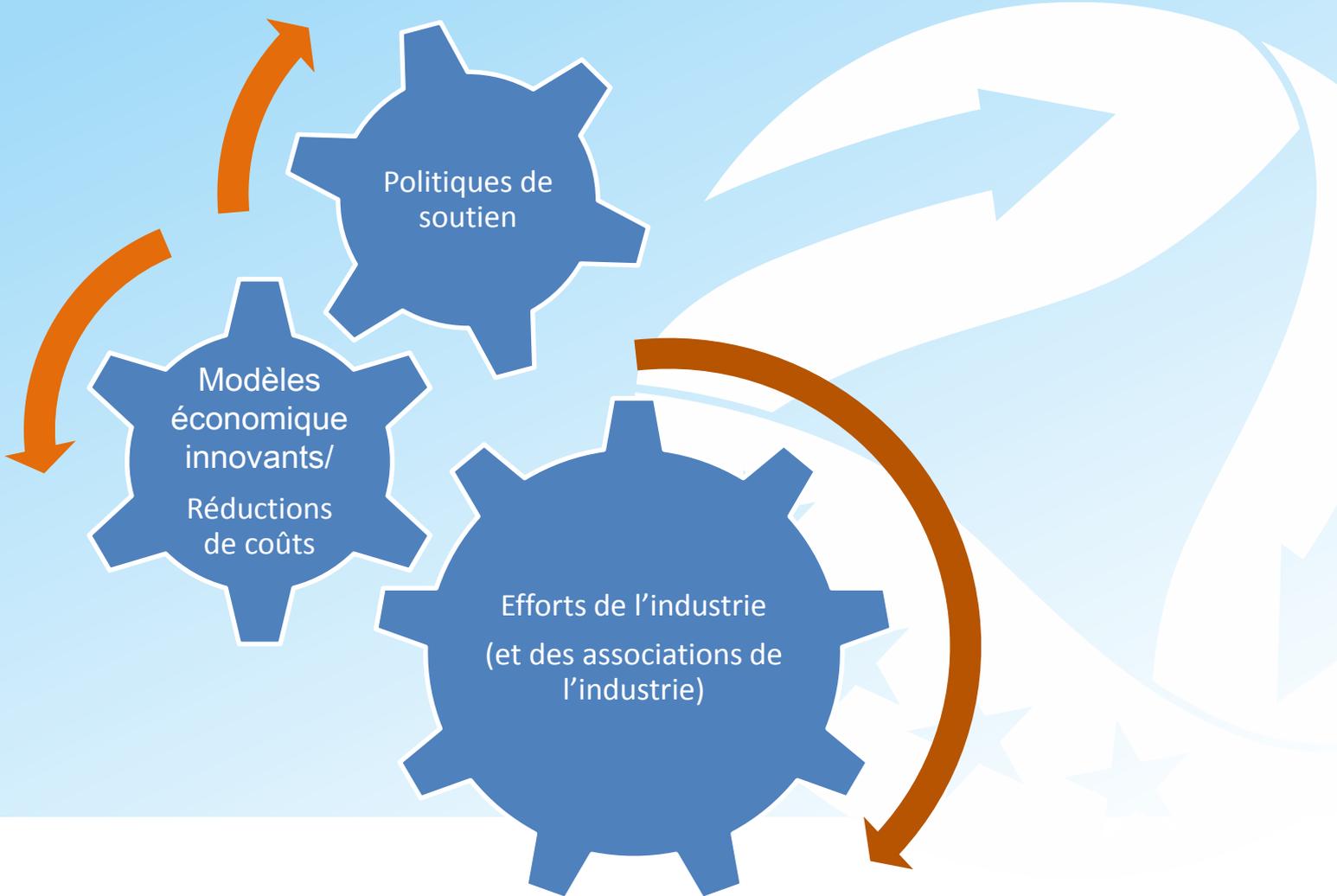
Network Codes (NC RfG)

- NC RfG to be adopted in February-March 2016
- Micro-CHP eligible under the “**Emerging Technology Classification**”
- Mini-CHP can benefit from a **simplified “third party derogation”** applied to a class of series produced generators

On the radar

- **European Primary Energy Factor Review**
- **Energy Labelling Directive Review**
- **Energy Performance of Buildings Directive Review**

Conclusions



Réservez cette date!

2016

The Power of Heat

COGEN Europe Annual
Conference & Gala Dinner

22 -23 March 2016 | Brussels



COGEN
EUROPE

#thepowerofheat



COGEN EUROPE

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COGEN Europe Recognition Awards & Gala Dinner 2016

- 22 March: COGEN Europe Recognition Awards & Gala Dinner.
- Deadline Recognition Awards Nominations: 12 February 2016.
- Each year COGEN Europe recognises those who have contributed most to cogeneration through outstanding performance and achievement. The COGEN Europe Recognition Awards are an opportunity for individuals and organisations to gain recognition for their achievements in developing, applying and promoting cogeneration, and to demonstrate the strengths and skills of the cogeneration sector in the EU.
- Four categories of Award: Policy Development, Technology and Innovation, Market Development (organisation), Market Development (individual).



Merci pour votre attention!

Des questions?

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