

# 2017 COGEN Europe National Snapshot Survey

## Executive Summary



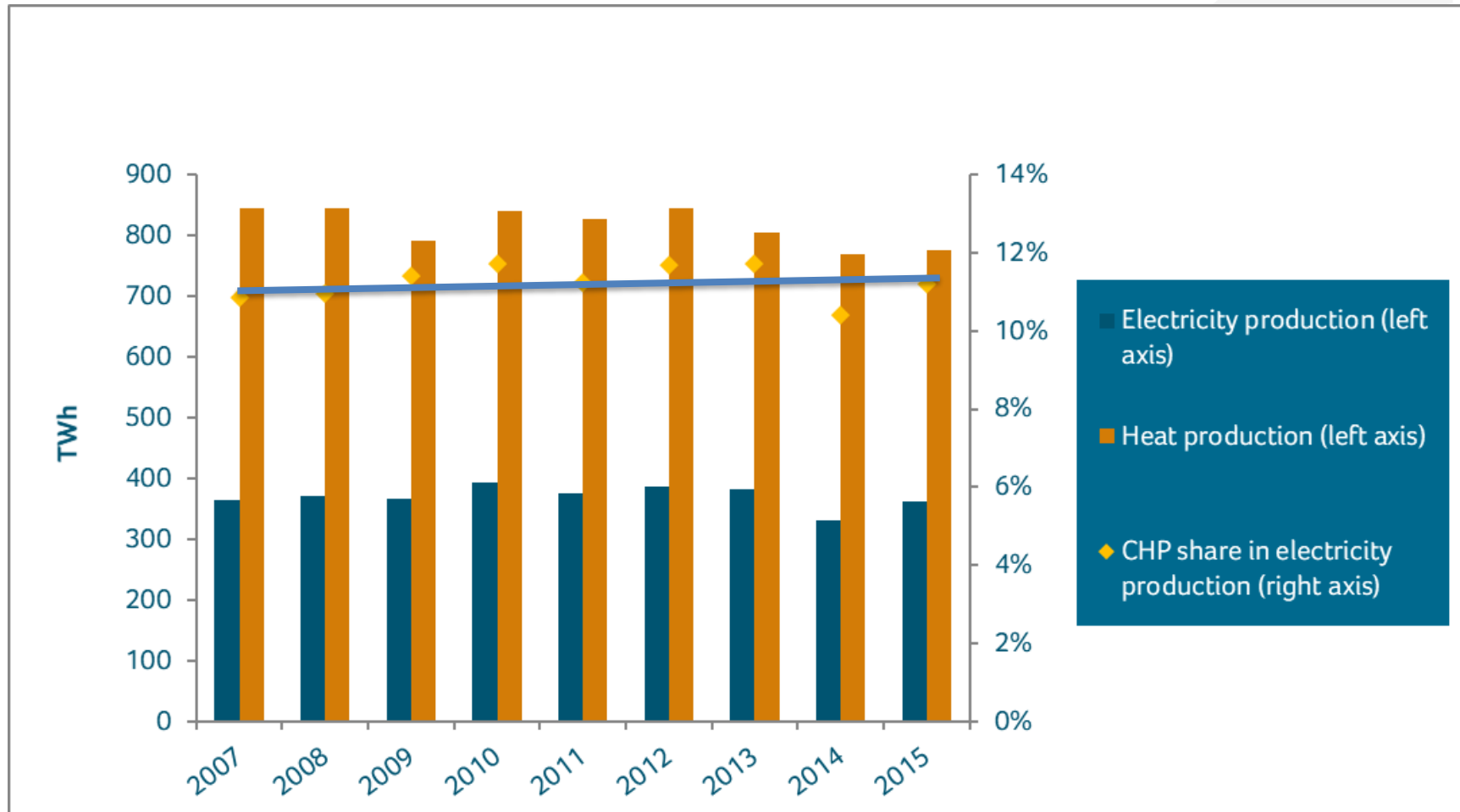
**COGEN**

EUROPE The European Association  
for the Promotion of Cogeneration

# Overview of CHP in Europe

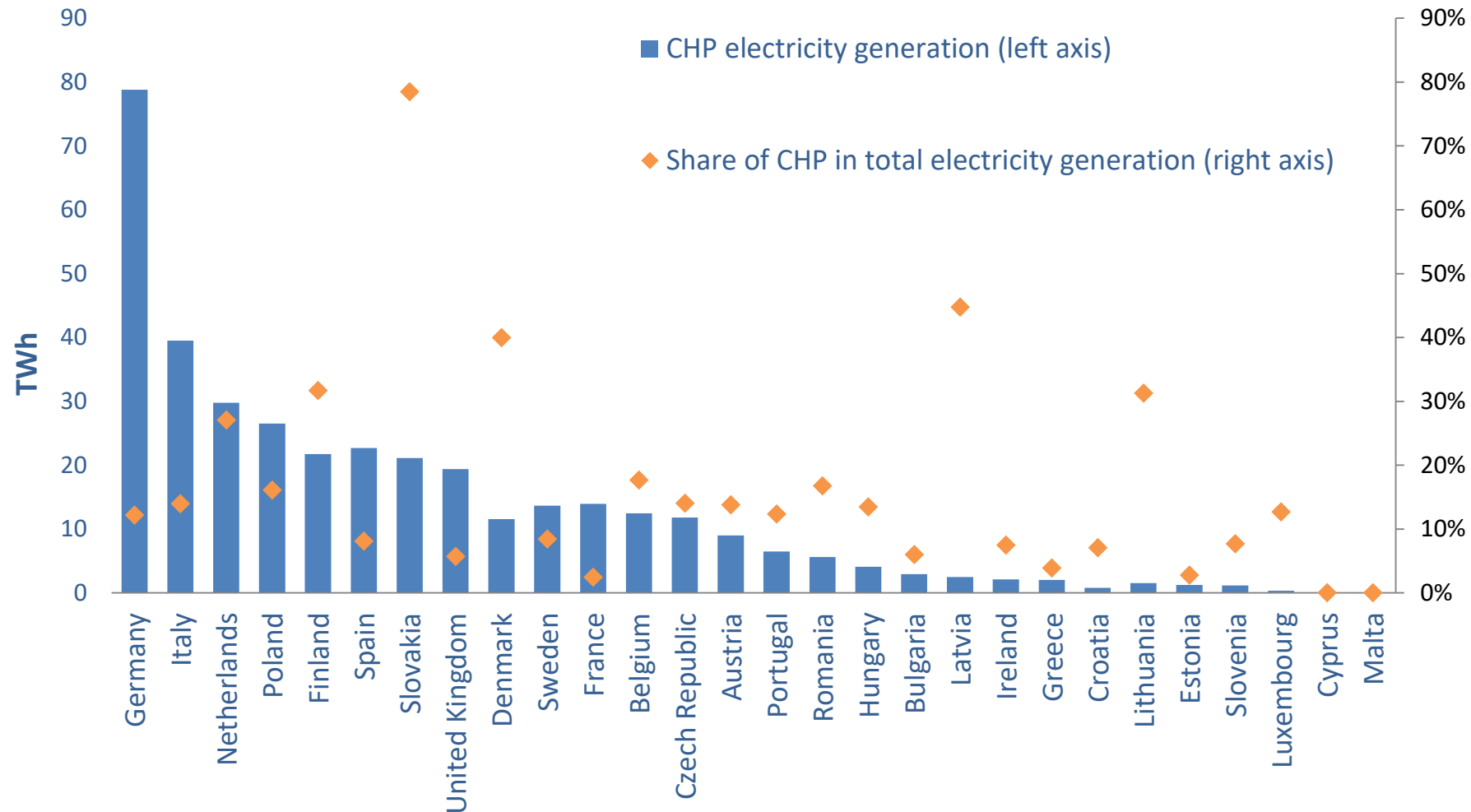
# CHP in Europe - Overview

## Electricity and Heat Generation (2007-2015)

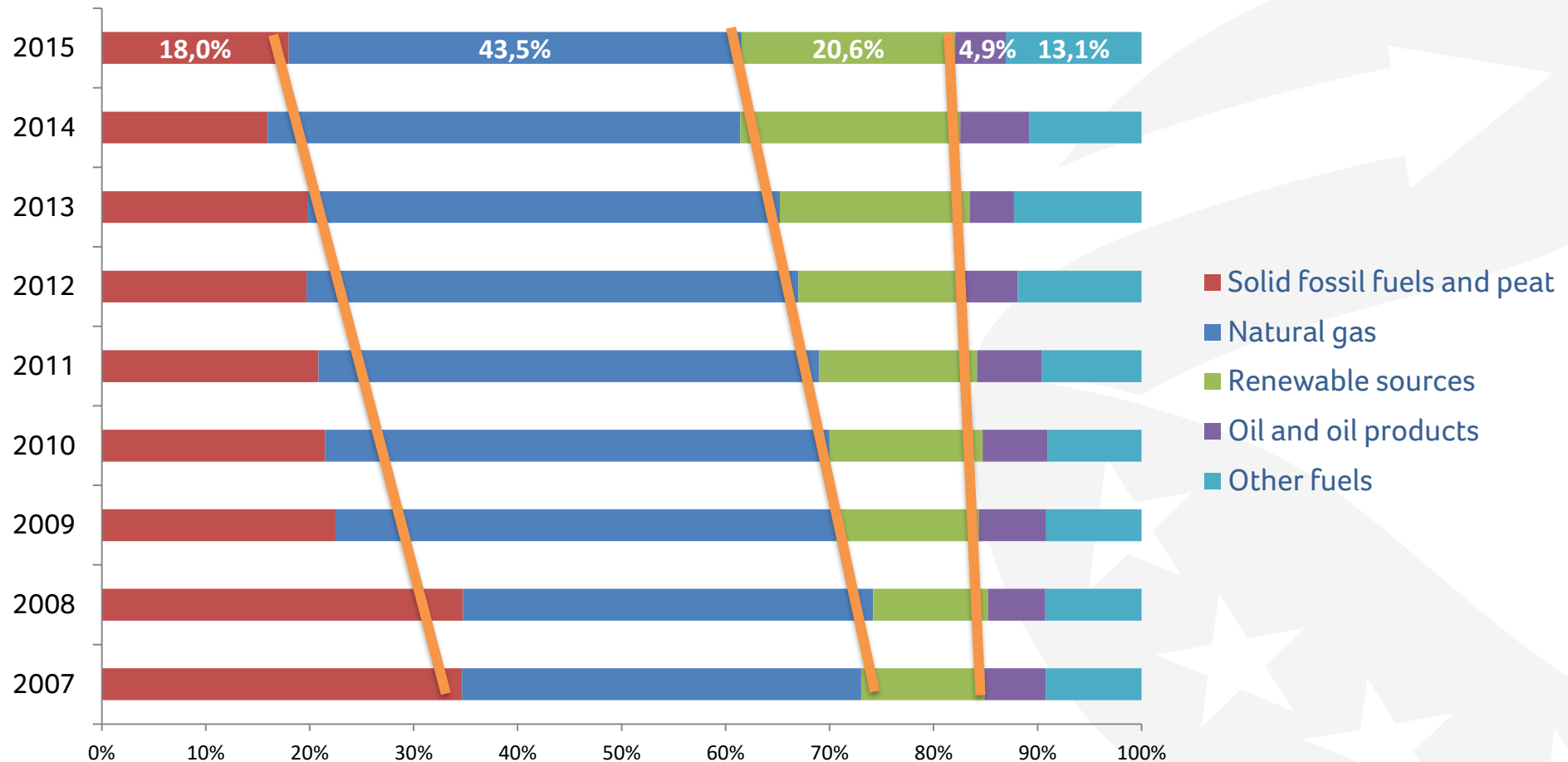


Data source: European Commission, Eurostat, 2017

# CHP Generated Electricity and Share in Total Electricity Production by Country in 2015



# CHP Fuel Mix in the EU (2007-2015)

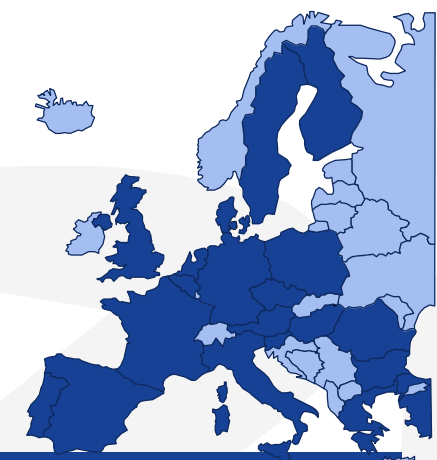


Data source: European Commission, Eurostat, 2017

CHP fuel mix strongly influenced by fuel price dynamics & support schemes.

RES is increasing its share in the CHP fuel mix, reaching 20% in 2015.

Expert contributions from **20** CHP national experts...



## 2017 Cogeneration National Snapshot Survey

...representing **95%** of installed capacity **in EU28 & Turkey**

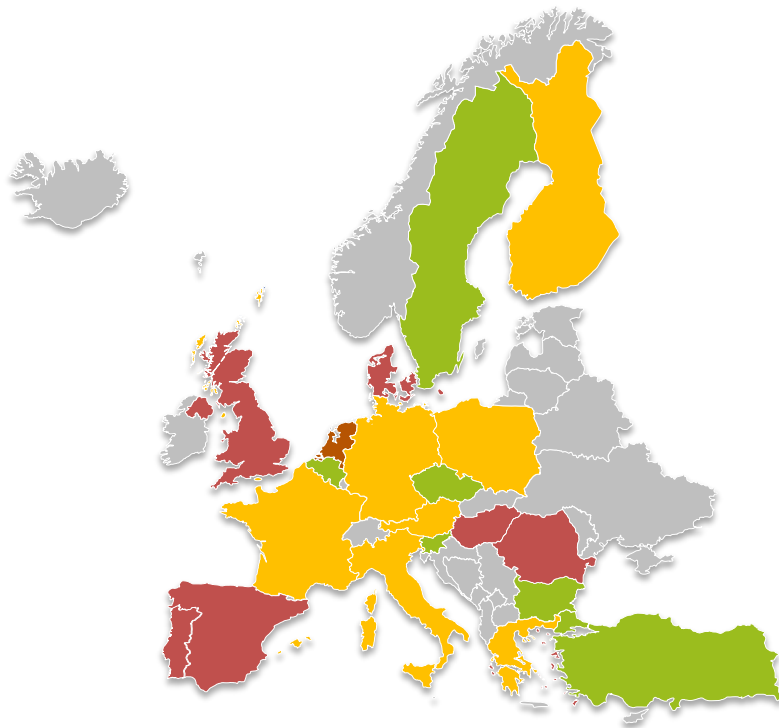
...capturing the **European CHP industry sentiment**

...expanding outside of Europe, with **guest contribution from Japan**

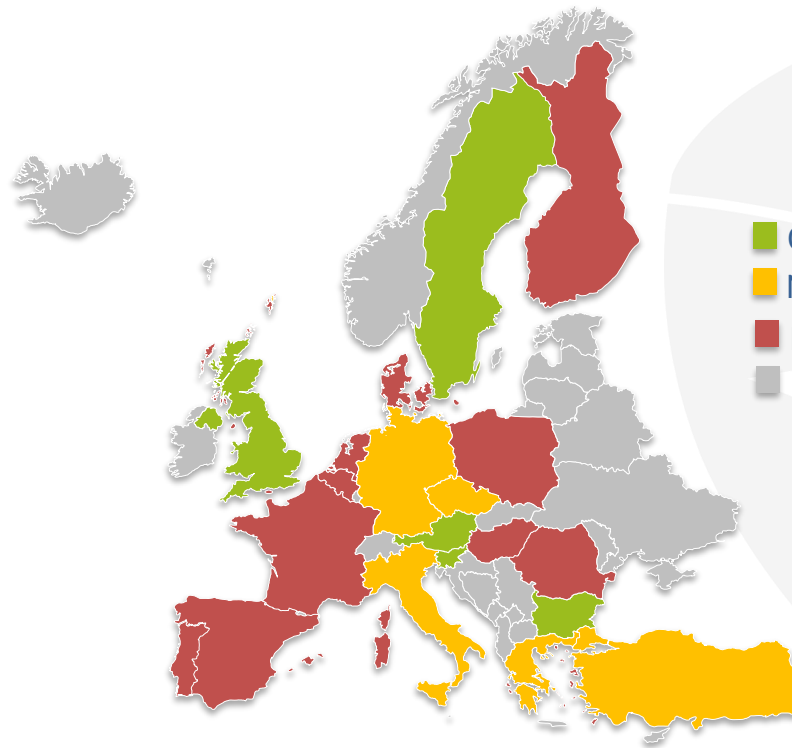


# CHP Market Developments in Europe (2012-2016)

## CHP Installed Capacity



## CHP Generated Electricity

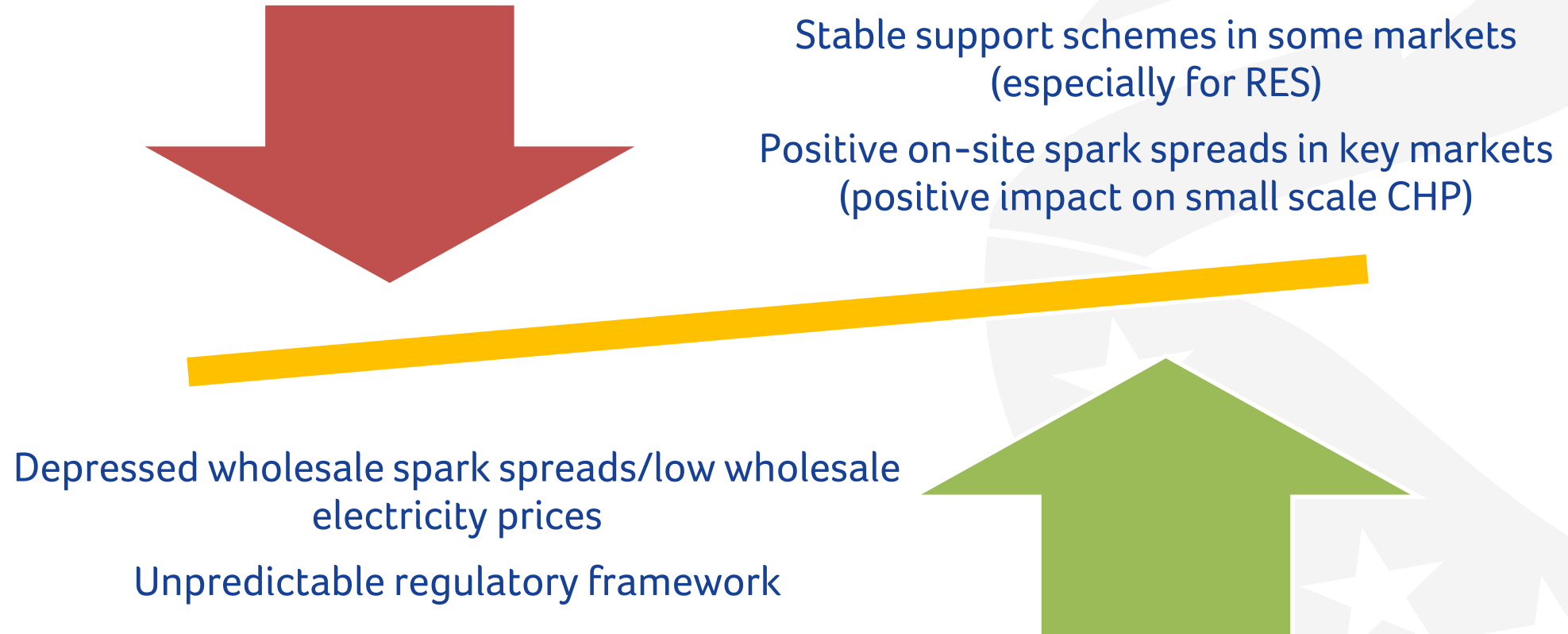


- Growth
- No change
- Decline
- No data

Generally **stable installed capacity** but...

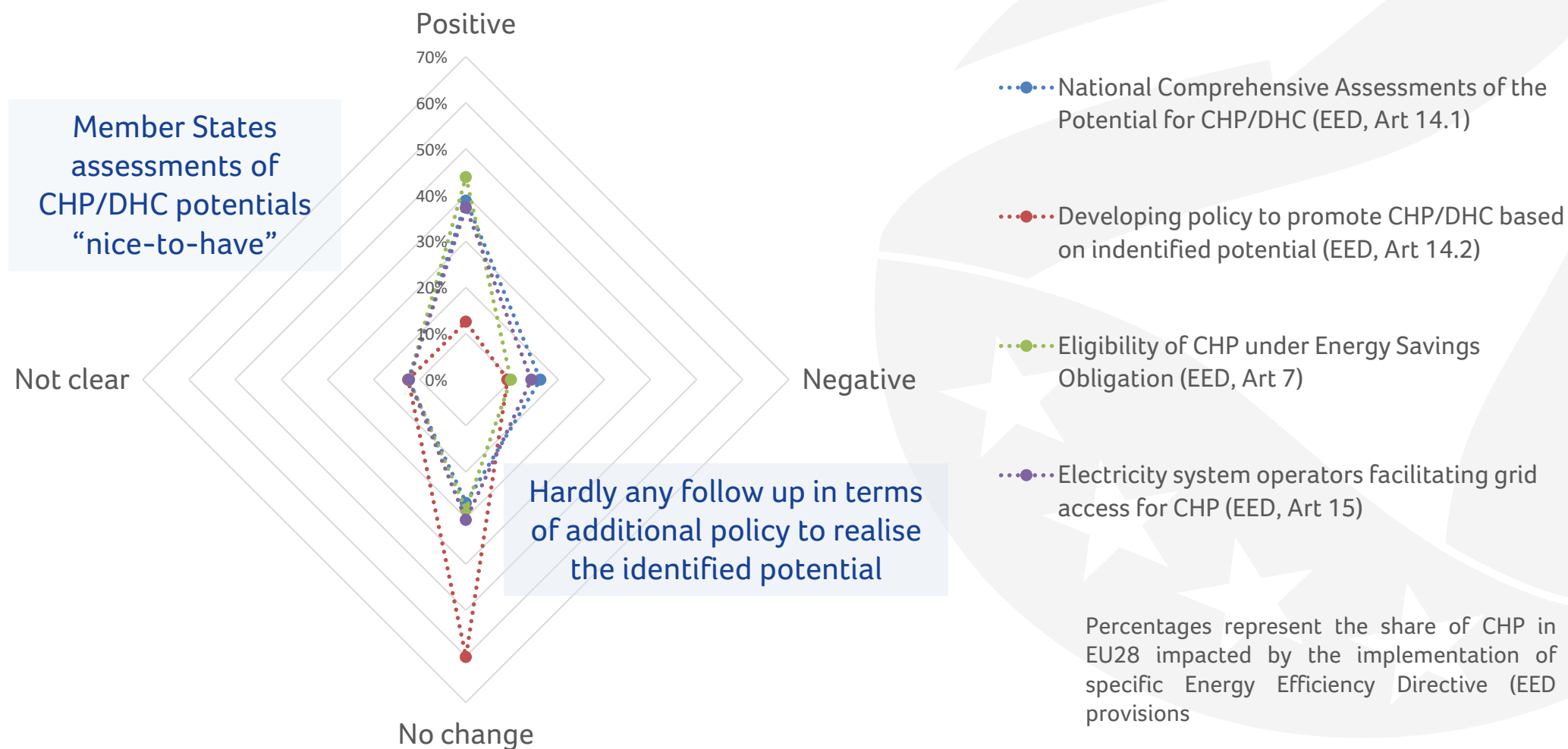
...more pronounced **standstill or decline in generated electricity** and share in total electricity production

# Main Factors Affecting CHP Markets at National Level

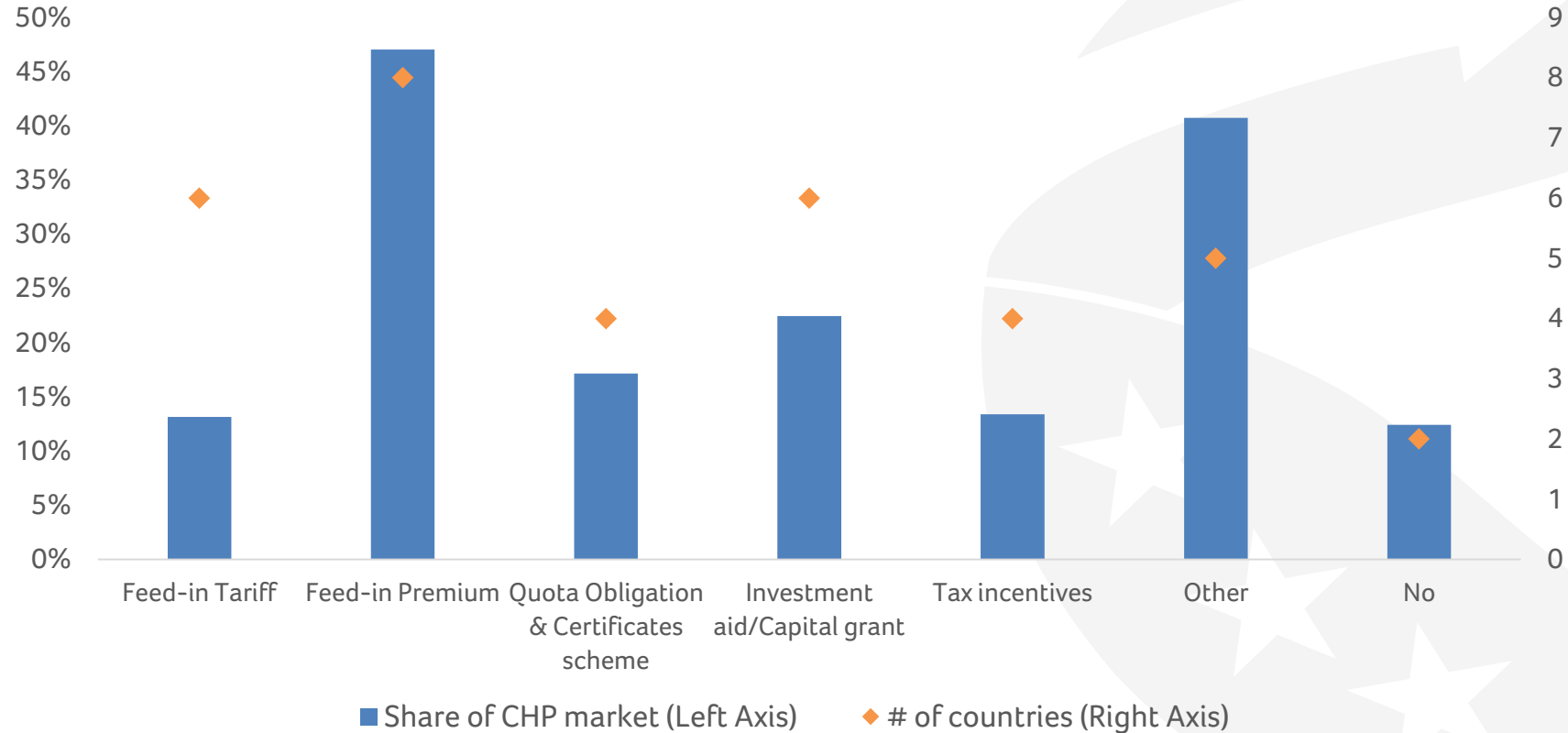


# Policy Environment

# Implementation of CHP provisions in Energy Efficiency Directive – Experts’ Evaluation



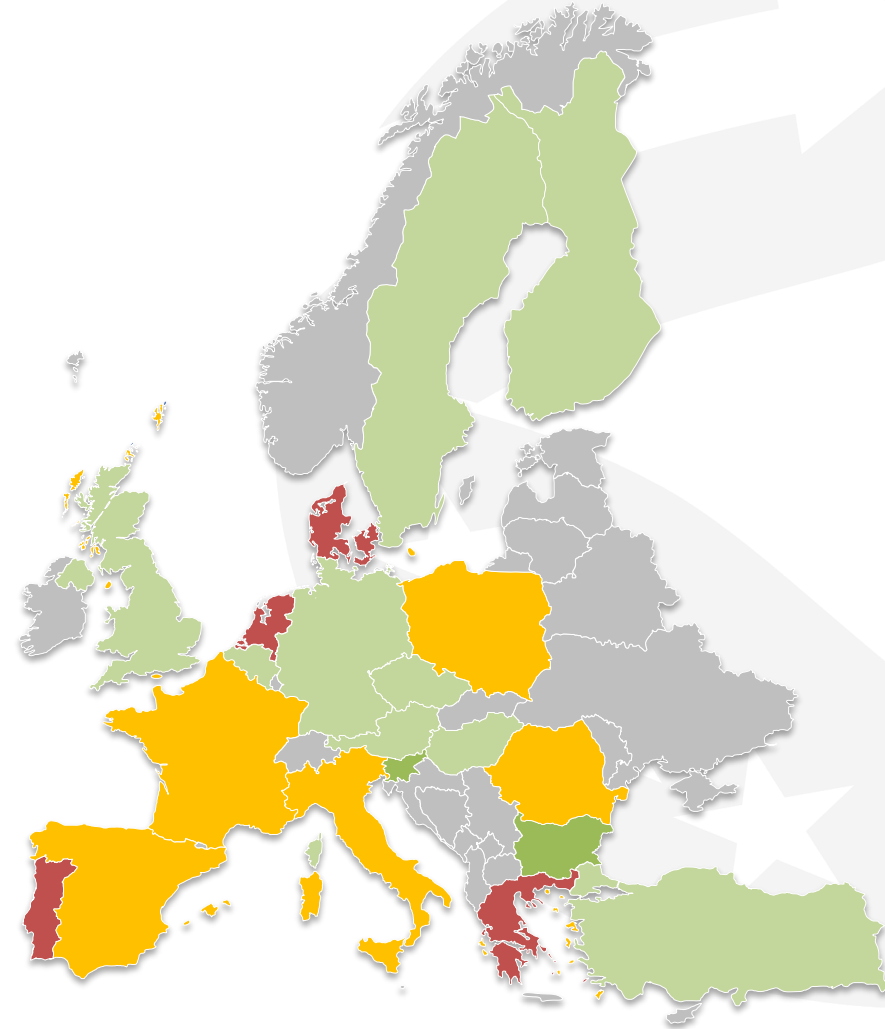
# Available Support for CHP in EU28 & Turkey in 2016



# CHP Markets Outlook

# 5-year CHP Markets Outlook

In nearly **60% of the CHP markets** in Europe, experts expect **steady and moderate growth** in the next 5 years.



# CHP in Europe Outlook

## Prerequisites for Growth

**Better prospects for the CHP sector are contingent on:**

- ✓ An **ambitious implementation of the EED**
- ✓ A favourable and stable policy environment taking an **integrated view on the energy system** & recognising the **flexibility of CHP** plants
- ✓ (EU) state aid policy adapted to potential and needs of CHP sector
- ✓ Applying fair/real-use **grid tariffs charged on electricity self-produced & - consumed**
- ✓ Improvement of energy market conditions
- ✓ Better awareness of CHP technologies
- ✓ **Improved investment/financing opportunities**

# Getting the Clean Energy Package right for Cogeneration

# Energy Efficiency Directive – Key asks

**Apply energy efficiency across whole energy value chain**

→ Account for both primary AND final energy

**Set accurate EU PEF (Annex IV)**

→ Proper methodology & value – current efficiency & 2.3 or higher

→ For EED only

→ For Ecodesign & Labelling of heaters account for seasonality and electrification impact on increasing carbon intensity of heating sector

**Strengthen Energy Savings Obligation (article 7)**

→ Ensure cogeneration is the preferred alternative to final energy saving up to 25%, as part MS flexibility to deliver Art 7 obligation

# Renewable Energy Directive – Key asks



**Support Biomass use in high efficiency cogeneration for installations larger than 20 MWth (thermal input) and limit alternative support where cogeneration is not feasible (Article 26.8)**

**Consider high efficiency cogeneration to increase renewable heat share in energy consumption**

→ Ensuring cost-effective, reliable and efficient heat supply to different types of energy consumers (Article 23)

**Reward efficient and low carbon flexibility solutions that support the integration of electricity from intermittent renewable**

# Governance – Key asks



**Cogeneration should be accounted in Member States Climate & Energy Plans (Art 19 & Art 4)**

**Member States should report on supply side efficiency as part of Annex II**

**References to limiting curtailment of cogeneration should be maintained as part Annex I**

# Electricity Market Design – Key asks



**Maintain priority of dispatch for existing cogeneration projects & provide adequate definition for “significant modifications”, re-assuring market operators that the business case for their investment will not be lost (Electricity Regulation, Articles 11 and 12)**

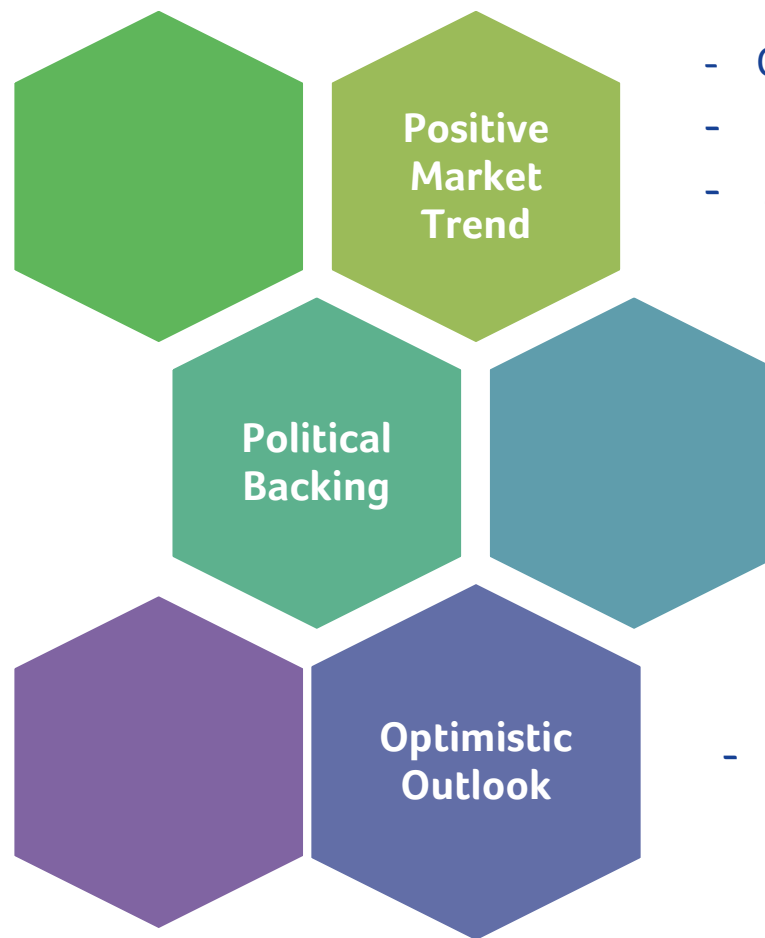
**Maintain guaranteed access to the grid for high efficiency cogeneration, so limit curtailment as last resort solution especially for self-consumed electricity (ib.)**

**Include cogeneration in local economy as part of adequacy assessments (Electricity Regulation, Article 19).**

**Ensure transparent, cost-reflective and non-discriminatory network tariff structures based on the real use of the grid (Electricity Directive, Article 15.2).**

## Cogeneration outside Europe - Japan

# Sneak Peak on Japan!



- CHP seen as key for security of supply
- Rapid growth in residential market
- Market entry of highly efficient CHP models
- CHP supported through tax incentives and subsidies (e.g. fuel cell micro-CHP) as part of energy & climate strategy
- New Feed-In Tariff for RES CHP
- Present growth expected to continue in the coming 5 years

**To purchase the 2017 Snapshot Survey:**

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