COGEN Europe reflections on EED

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Impact of the Energy Efficiency Directive and Development of Heat Markets and Pricing

District heating workshop, 4. - 5. December 2012, Riga, Latvia

Merging of Directives to EED

How much we gain?

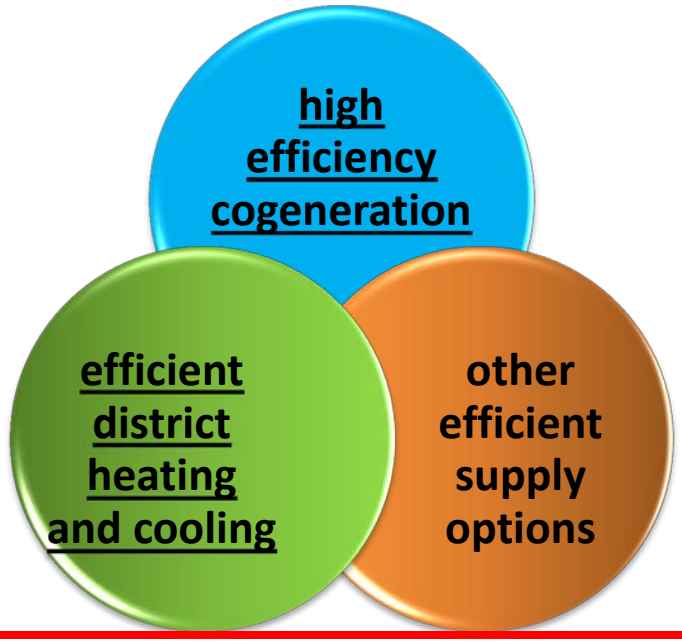
Have expected more?

- ✓ **CHP – proved energy efficiency technology / measure**
- ✓ **Gets role in NEEAP**
- – **No binding target for MS (binding measures instead)**
- – **Implementation lies on MS – all capable of this task?**

Efficiency in energy supply

New chapter of EED *(Article 14 and 15):*

The overall objective is to encourage the identification and delivery of cost effective potential for efficient heating and cooling through the use of:



Integrated approach!

Efficient heating & cooling: planning & utilization

Efficient heating and cooling

EED definitions:

'High efficiency CHP' – no changes!

'Efficient DHC' means a DHC system using at least:

- ***50 % renewable energy,***
- ***50 % waste heat,***
- ***75 % cogenerated heat or***
- ***50 % of a combination of such energy and heat***

'Efficient heating and cooling' *- measurably* ***reduces the input of primary energy*** *needed to supply one unit of delivered energy […]* ***in a cost effective way****, taking into account the energy required for extraction, conversion, transport and distribution*

PE savings + Cost effectiveness = Key EED concept

Key tasks for the MS

Comprehensive assessment of the potential for the application of high efficiency cogeneration and efficient district heating and cooling based on a **country-wide cost-benefit analysis (CBA) –** ***Annex VIII*** **(till 31 December 2015):**

CHALLENGE FOR MS!

1. **Assessment of the potential:**

   Heating and cooling demand, forecast, map of the national territory,…

   - **Technical potential for high efficient CHP & DHC**

2. **Cost benefit analysis assessment on the Country level:**

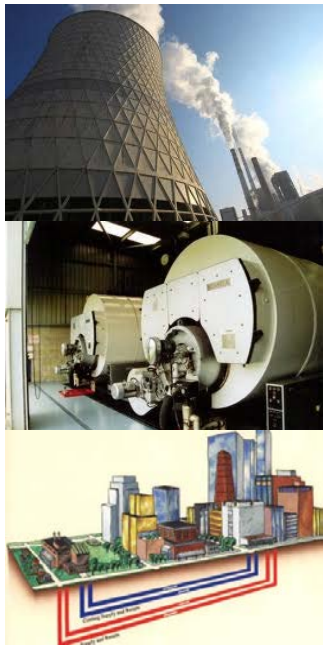
   MS shall provide detailed methodologies, assumptions, **comprehensive energy system planning that cover all relevant technical and economic options, scenario definition (baseline, alternative), valuation method & criterion (NPV), sensitivity analysis,…**

   - **Economic potential for high efficient CHP & DHC**

3. **MS shall take adequate measures […] and/or to accommodate the development of high-efficiency cogeneration […] if CBA is positive!**

Authorisation procedure >20MW$_{ther.inp.}$

Authorisation or equivalent permit criteria and procedures based on cost benefit analysis – installation level (after 5 June 2014): for planned or substantially refurbished installations with total thermal input > 20 MW:



- **Thermal electricity generation:**
  - **CBA for CHP**
  - **Exempted: Nuclear PP, Peak load/Back-up power, CCS**
- **Industrial installation**
  - **CBA for CHP & connection on DHC network**
- **District heating and cooling network**
  - **CBA for nearby industrial waste heat utilisation**

- **MS to adopt detailed guidance on the CBA to ensure consistent, robust and quick application of this requirement across sites**
  (common assumptions on payback periods, required rates of return on investment, projected fuel and electricity prices, policy costs and support levels)

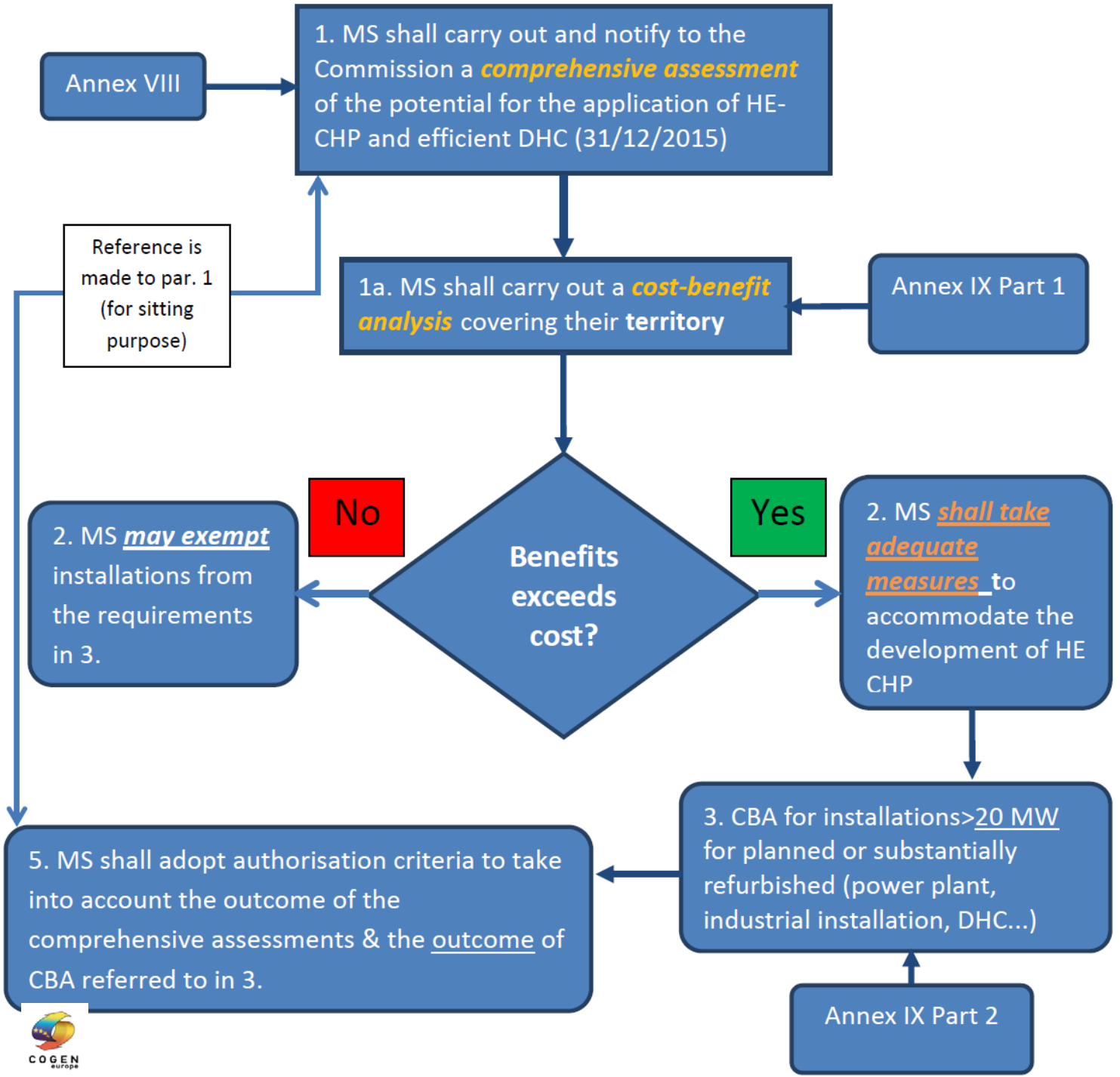
Authorisation procedure (2)

For exempting individual industrial or district heating installations from CBA MS may also lay down <u>thresholds</u>, expressed in terms of:

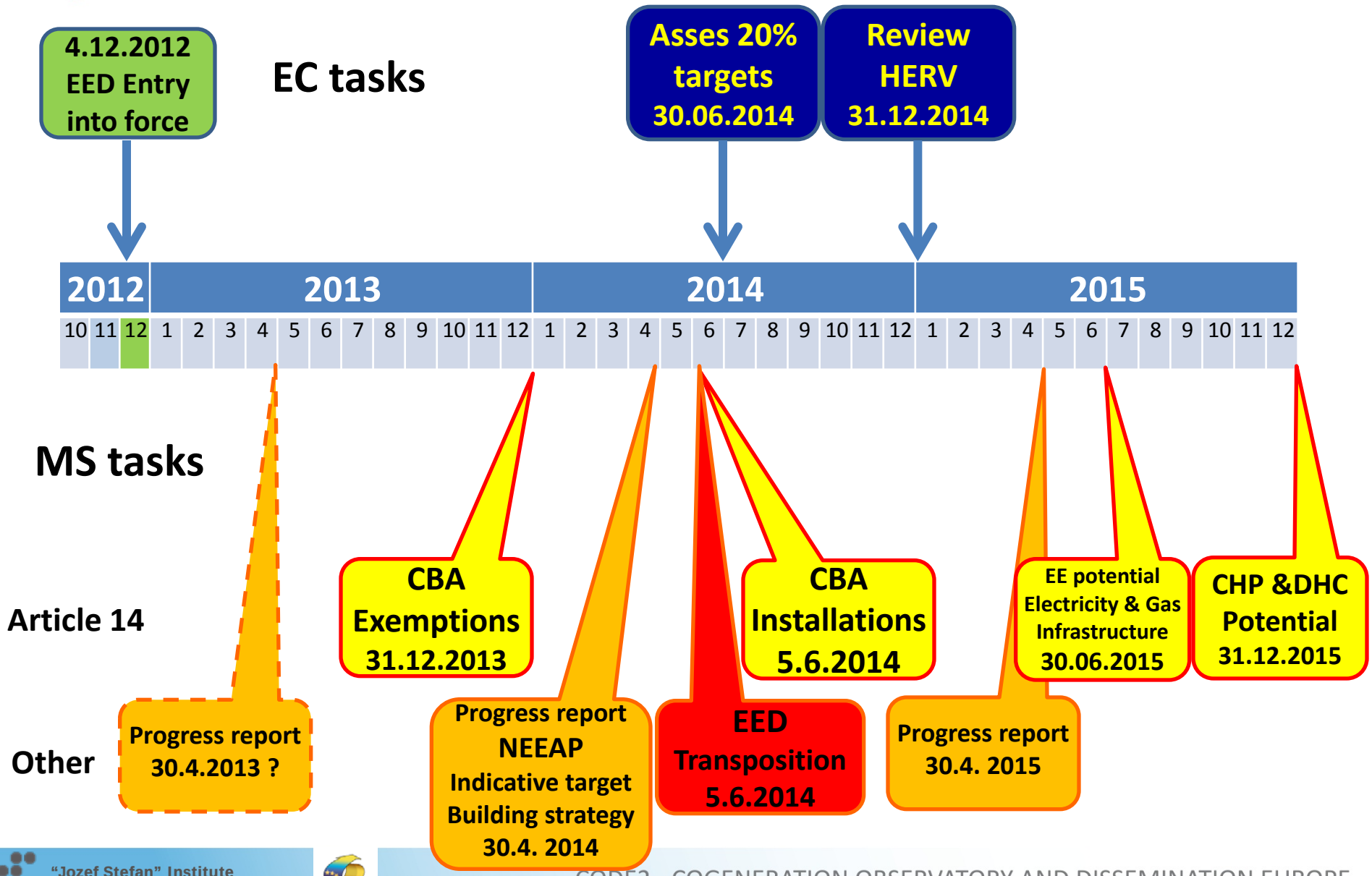
- ***the amount of available useful waste heat,***
- ***the demand for heat or***
- ***the distances between industrial installations and district heating networks***

(exemptions from CBA notified by **31. December 2013**)

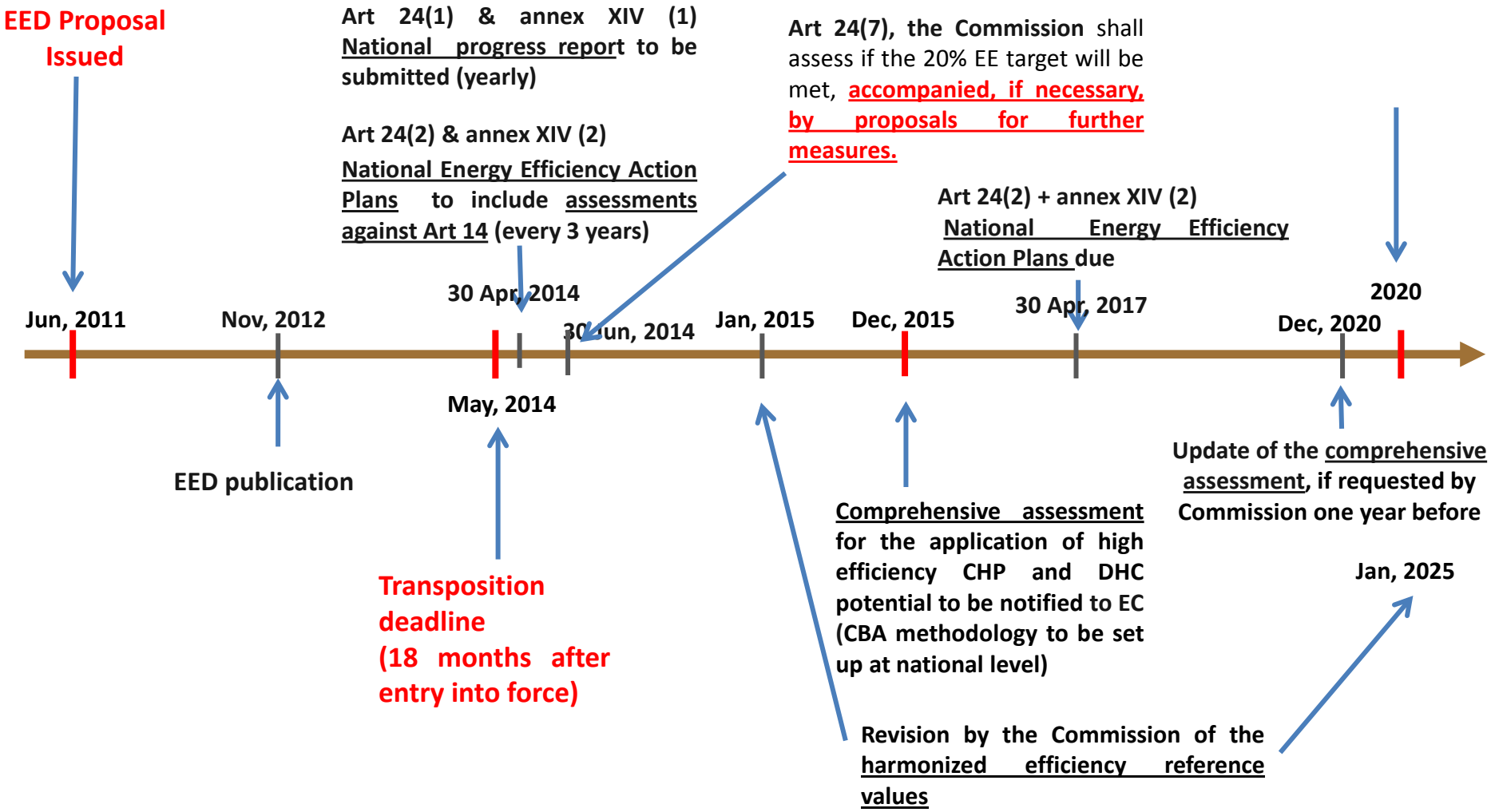
Flow chart on how Article 14 will work



Timeline for implementation of art 14



Detailed timeline for implementation of art 14 of the EED



Article 15 (CHP)

Obliges MS to ensure that cogenerated electricity from high efficiency CHP gets:

- a **guaranteed transmission and distribution**
- priority or **guaranteed access** to the grid
- **priority of dispatch** in so far as the secure system operation
- **simple notification** "install and inform" for micro CHP
- **enable system services** from CHP, demand response

But:

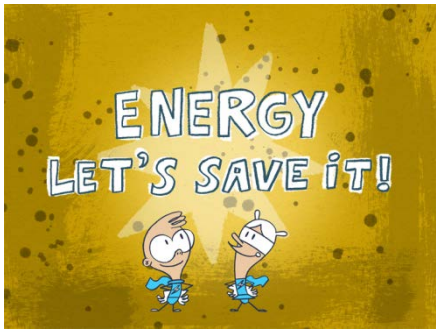
Reference is made to Electricity Directive, 2009/72/EC and RES-E provisions in Directive 2009/28/EC:

- **When ranking different types/classes of generators, variable RES-E shall be first but high efficiency CHP may be on a parity level.**
- **However, MS shall take into account the need to ensure continuity in heat supply**

Other EED provisions

Article 7: Energy efficiency obligation schemes

- **<u>1.5% energy saving target per annum</u>** for energy suppliers (to be designated by MS)
  - full latitude to design the scheme based on Primary or Final Energy Savings
  - energy savings achieved in the energy transformation, distribution and transmission sectors, including efficient DHC infrastructure allowed
  - MS can use also alternative measures to achieve same savings



Other EED provisions (2)

Article 8: Energy audits and energy management systems

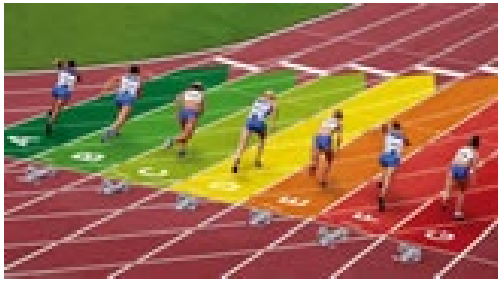
- Programs for SME
- Obligatory for other companies – every 4 years, except if implemented certified energy or environmental management system (ISO 50.001, etc.)

Article 9: Metering

- Individual metering, provide information on time of use and objectives on energy efficiency

Article: 18: Energy services (ES)

- MS promotion of ES and access for SMEs



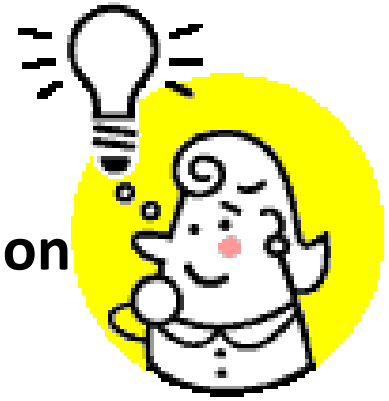
Could that trigger faster CHP development?

Final reflection on EED

➢ How much we gained?

- We have not lost, cogeneration founded as energy efficiency!
- Efficiency in energy supply!
- Hope for the improvement by new obligations and instruments

➢ Implementation lies on MS



- Assessment of the potential
- CBA on national/installation level and authorisation procedures (what for units < 20 $MW_{ther.inp.}$?)
- Regulatory aspects (dispatch, connection,…)
- CA – EED: New CT 7 Efficiency in Energy supply (CHP, DHC)
  www.esd-ca.eu

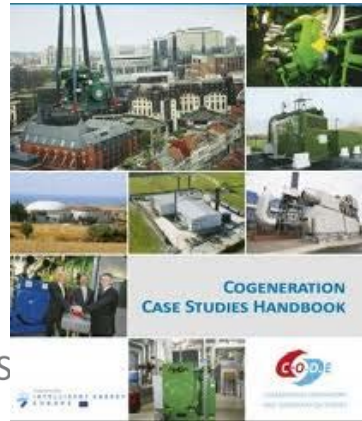
Important contribution of CODE 2 project !

Follow-up project CODE2

- The **new CODE2 project** runs from 1 July 2012 till end of 2014.
- It will develop **national Cogeneration Roadmaps** and one **European Cogeneration Roadmap**.
  These roadmaps will propose actions on several fronts in close interaction with the key stakeholders (policy-makers, industry and civil society).
- The project uses a **desk research/workshop format** to develop and comment the roadmaps and **raise all round awareness of the opportunity and existing resources for developing CHP deployment**.
- **Workshops in 7 pilot countries** will specifically explore the implications and **develop an interpretation of the new EED** and will seek to develop **coalitions on CHP** at national level involving key stakeholders.

Expected results

- A further **strengthening of the CODE1 Regional Network**.
- **27 national Cogeneration Roadmaps**
- **One European Cogeneration Roadmap** with concrete proposals for policy improvement (EED), expansion in key industry sectors and awareness raising
- **Identification of micro-CHP and bio-energy CHP potentials**
- **7 workshops in pilot countries** where draft Roadmaps are discussed
- **Establishment of CHP Coalitions in 27 EU Member States** involving industry, policy-makers and interest groups
- **Practical "How-to" guides for key sectors** (paper, food, hotels, SMEs)
- **Best practice cases on cogeneration** in target sectors
- **Awareness analysis**



Partners and contacts

The CODE2 team consists of the following partners:

1. **COGEN Europe**, the European association for the promotion of cogeneration (Belgium)
2. **HACHP**, the Hellenic Association for Cogeneration of Heat & Power (Greece)
3. **Jožef Stefan Institute** (Slovenia)
4. **FAST**, Federazione delle Associazioni Scientifiche e Techniche (Italy)
5. **COGEN Vlaanderen** (Belgium)
6. **Energy Matters** (Netherlands)
7. **Berlin Energy Agency** (Germany)
8. **KWK kommt** (Germany)

For more information visit www.code-project.eu or send an email to info@code-project.eu

Thank you for your attention
and your support of the CODE 2 project in our common goal on better promotion and faster development of cogeneration in EU!

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