

Jean Monnet Module *EU Environmental Policy:
Internal and External Dimensions (EU
ENVI)*



Co-funded by the
Erasmus+ Programme
of the European Union

EU Energy Union and Climate

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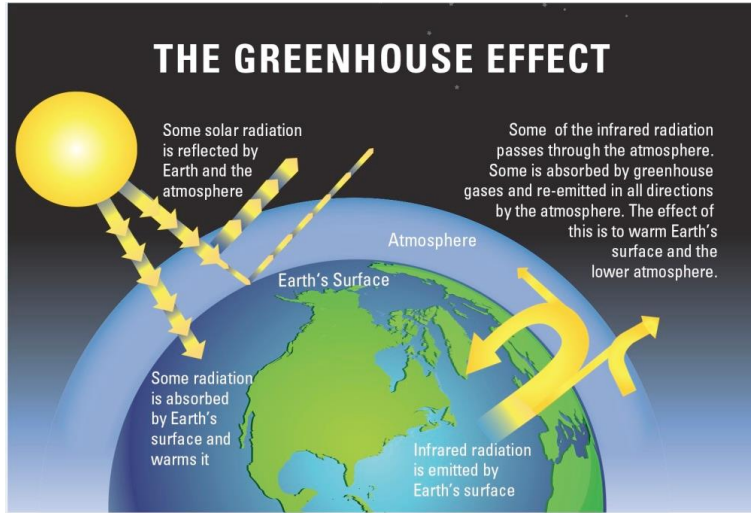
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Content of the lecture/seminar

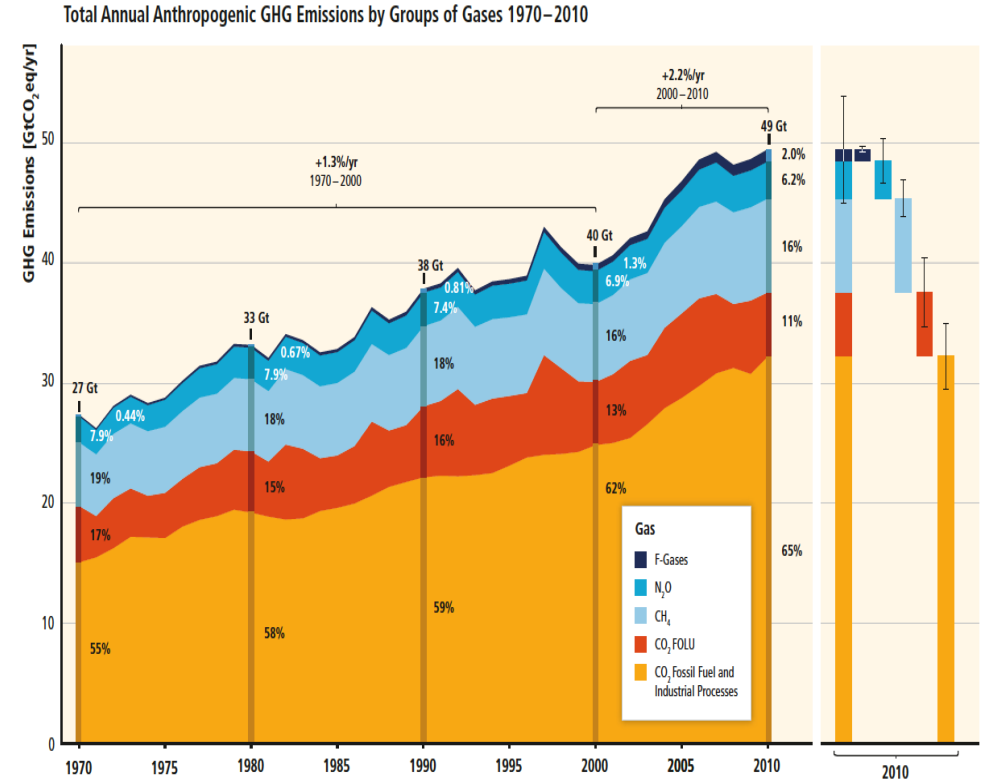
1. Introductory remarks on climate and EU energy
2. EU energy policy/union – development & short overview
3. Climate change and the EU Energy Union Governance

Based on desk research prepare a short presentation of your country's position on "EU Energy Union and Climate". If you come from a non-EU member state, chose and prepare a presentation on the position of the European Parliament, European Commission or other relevant EU stakeholders (NGOs, business, etc.).

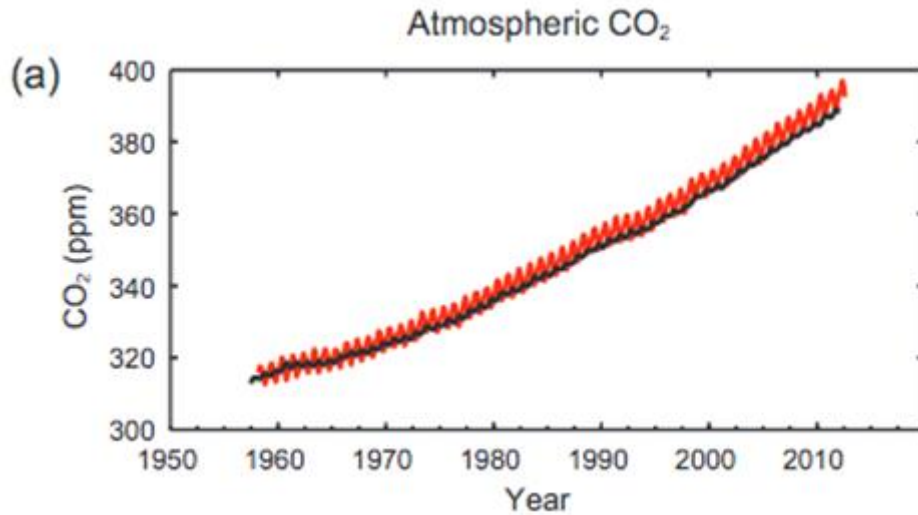
What is CC?



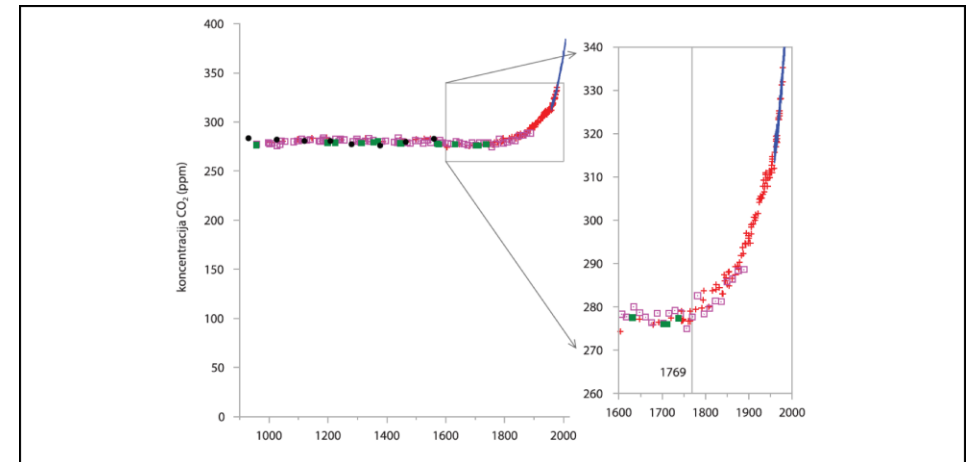
IPCC 2014, 7



Why bother with it?

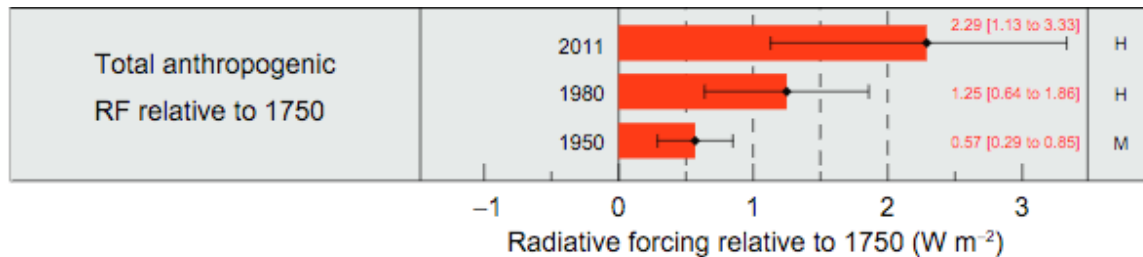
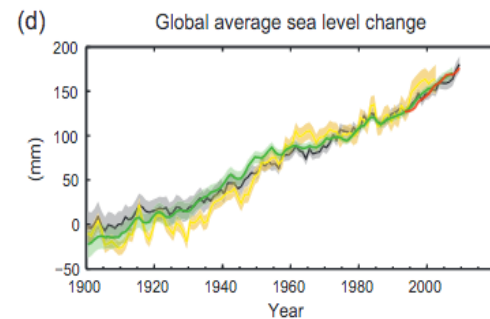
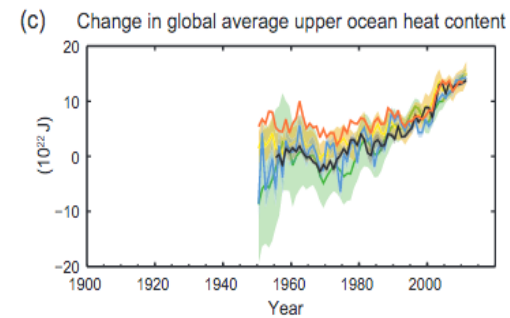
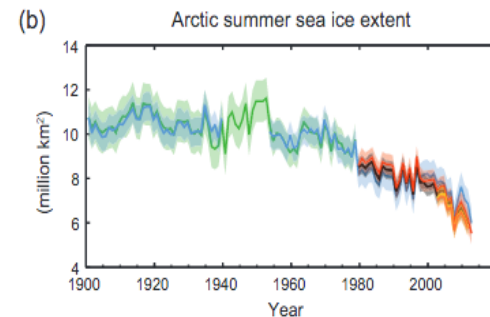
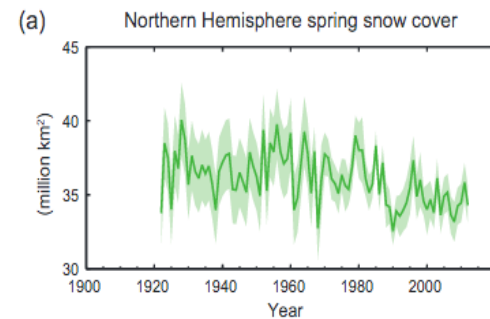
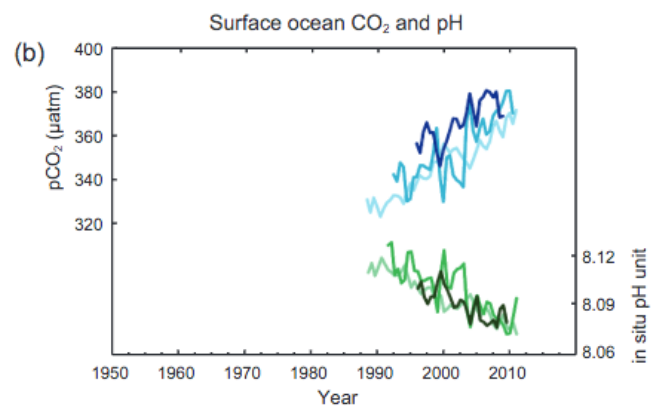
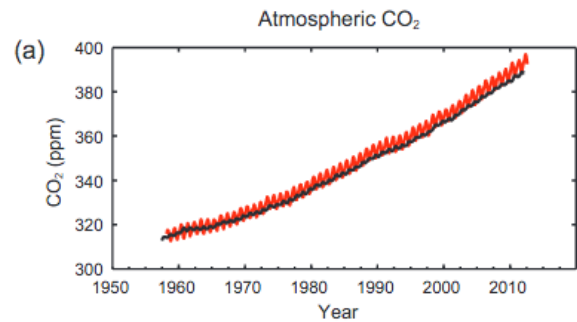
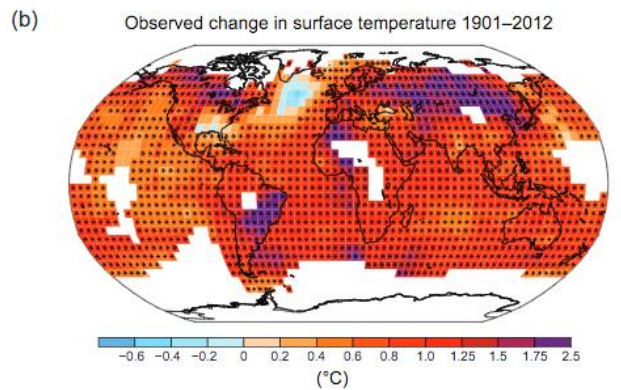
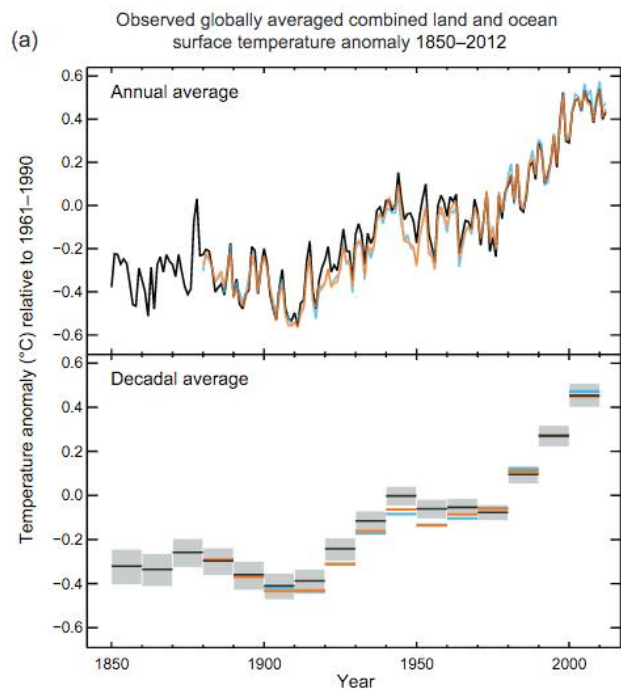


IPCC, 2014
MacKay 2013, 6



Why bother with it?

IPCC 2014



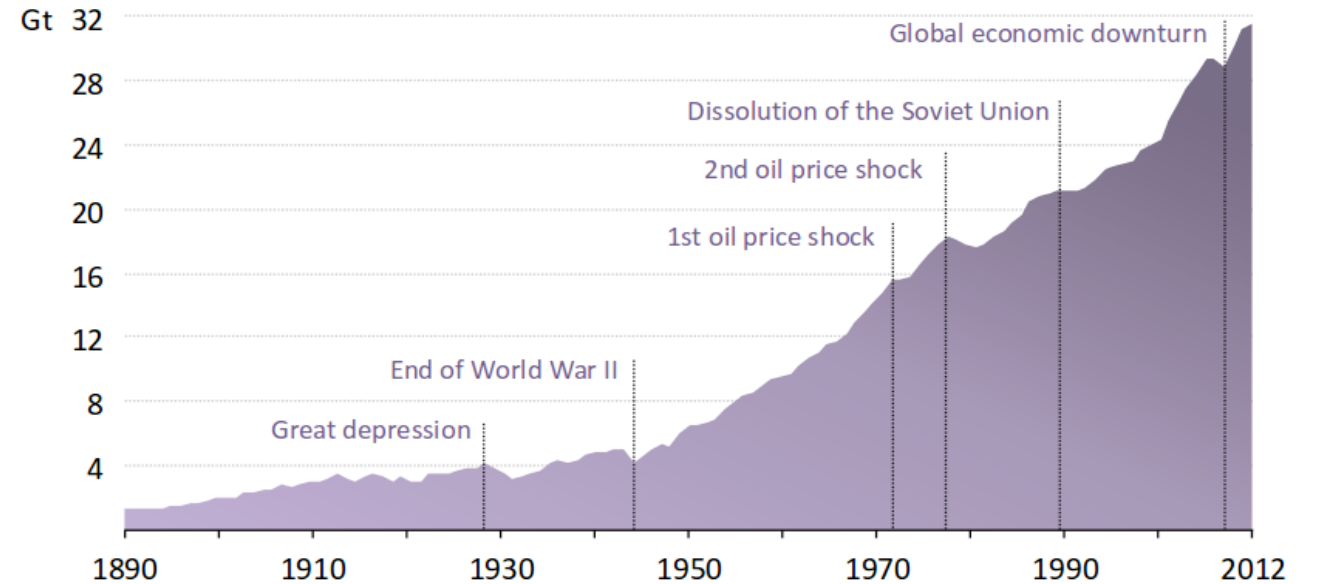
What to do about it?
When to do it?
Who will do it?

What has been done so far?

- [Svante Arrhenius](#)
- (Charles David) [Keeling curve](#)

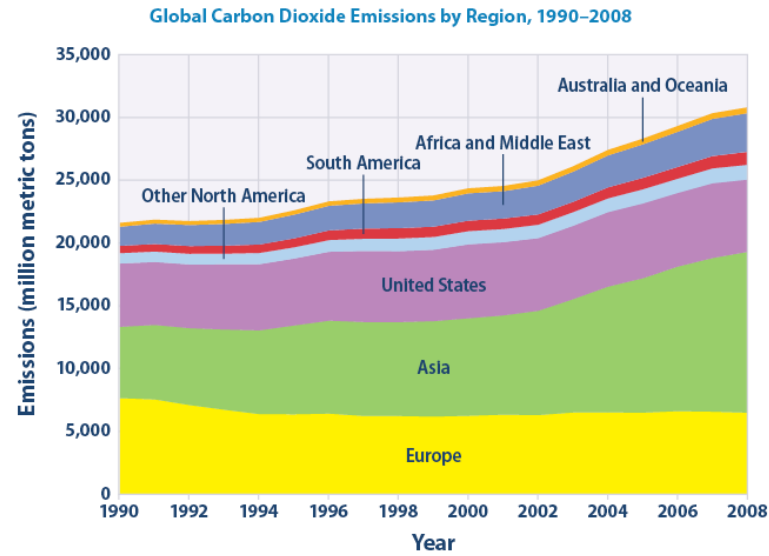
- [The United Nations Framework Convention on Climate Change](#)
- [Kyoto Protocol \(mechanisms\)](#)
- [\(Copenhagen Accord\)](#)
- [Paris Agreement](#)

Global energy-related CO₂ emissions



CO₂ emissions trends point to a long-term temperature increase of up to 5.3 °C

IEA 2013; EPA 2013

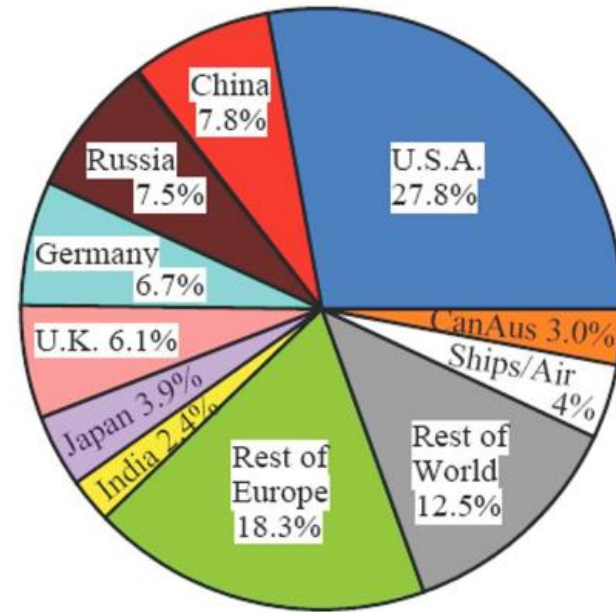


Data source: World Resources Institute. 2012. Climate Analysis Indicators Tool (CAIT). Version 9.0. Accessed May 2012. <http://cait.wri.org>.

For more information, visit U.S. EPA's "Climate Change Indicators in the United States" at www.epa.gov/climatechange/indicators.

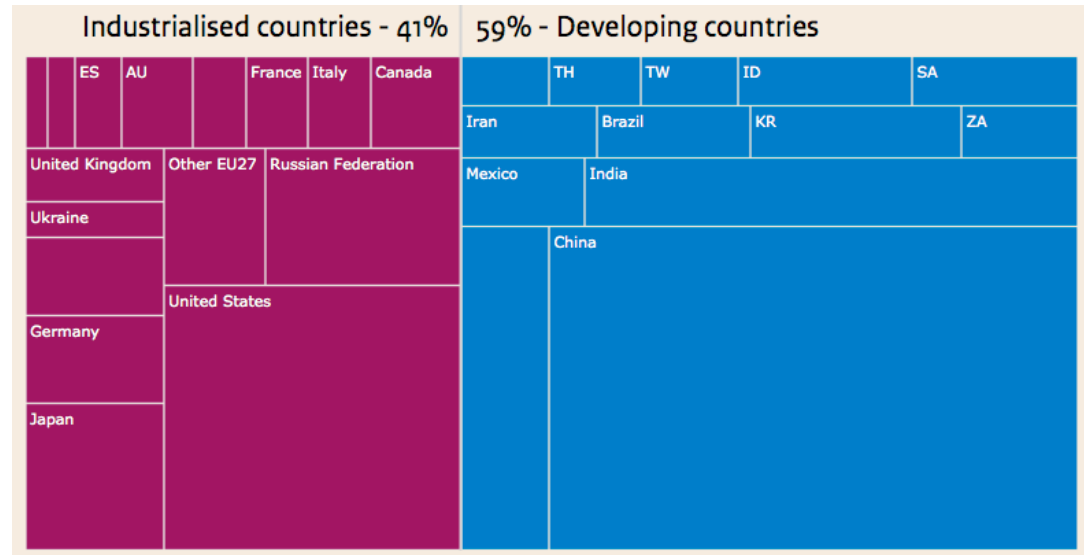
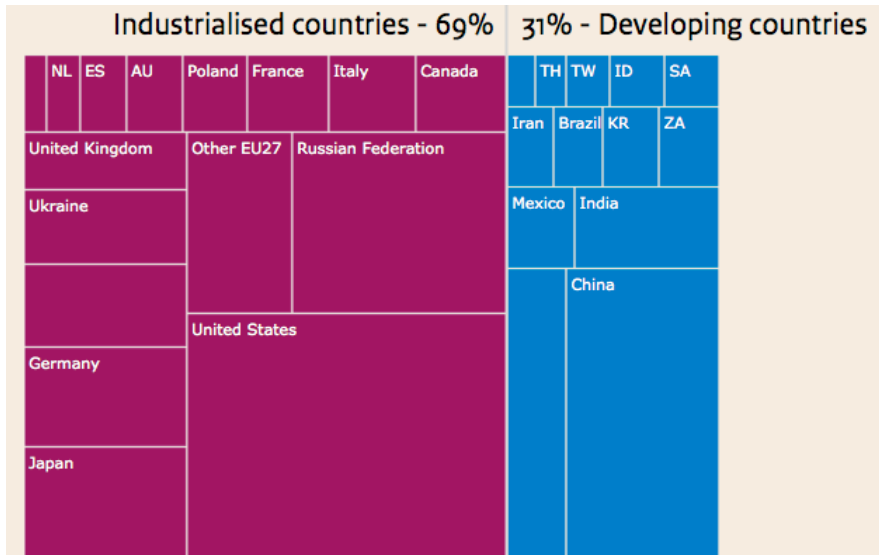
CO₂ emissions **1750-2005** (Higgins 2007)

CARBON MAP
(Guardian 2012)



IEA 2013; EPA 2013

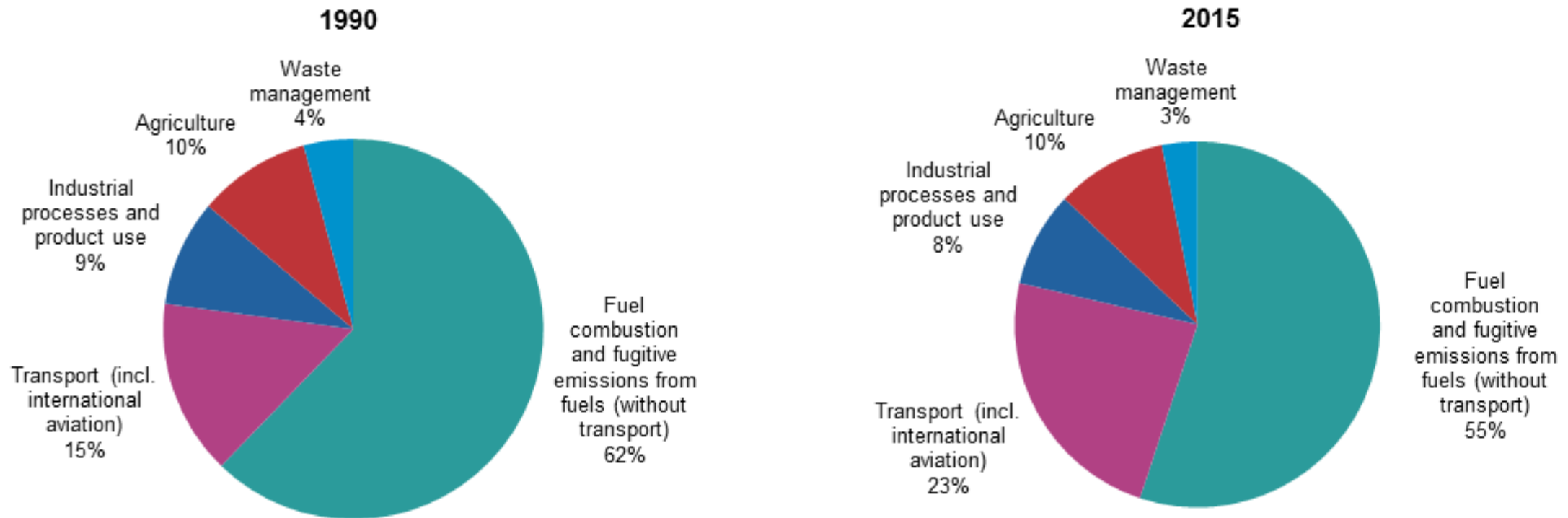
1992 → 2012



- ***Long-term temperature goal (Art. 2)***
 - **The Paris Agreement**, in seeking to strengthen the global response to climate change, **reaffirms the goal of limiting global temperature** increase to well **below 2 degrees Celsius**, while pursuing **efforts** to limit the increase **to 1.5 degrees**.
 - This Agreement will be implemented to reflect **equity** and the principle of **common but differentiated responsibilities** and **respective capabilities**, in the light of **different national circumstances**.
- ***Global peaking (Art. 4)***
 - To achieve this temperature goal, Parties aim to reach global peaking of greenhouse gas emissions **as soon as possible**, recognizing peaking will take longer for developing country Parties, so as to achieve a **balance between anthropogenic emissions** by sources and removals by sinks of greenhouse gases **in the second half of the century**.

Why do we talk about the climate and (EU) energy?

- Greenhouse gas emissions, analysis by source sector, EU-28, 1990 and 2015 (percentage of total)



Source: Eurostat, 2018

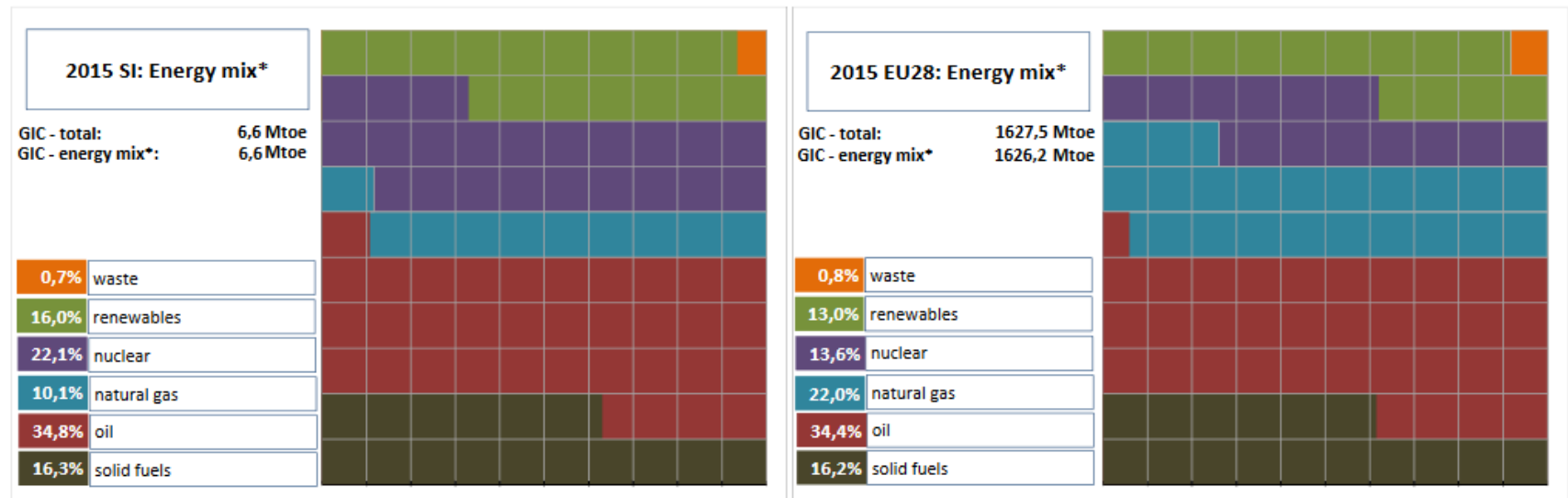
1. Introductory remarks on energy and the EU

European Commission - Press release
Energy Union: secure, sustainable, competitive, affordable energy for every European
Brussels, 25 February 2015

Key figures

1. The EU is the **largest energy importer** in the world, importing **53% of its energy**, at an annual cost of around **€400 billion**.

In comparison to the average energy mix in the EU, Slovenia's energy mix of primary products has a higher share of nuclear (22.1 % versus 13.6 %) and of renewables (16 % versus 13 %). On the other hand, the share of natural gas is significantly lower in Slovenia than on average in the EU (10.1 % versus 22 %).

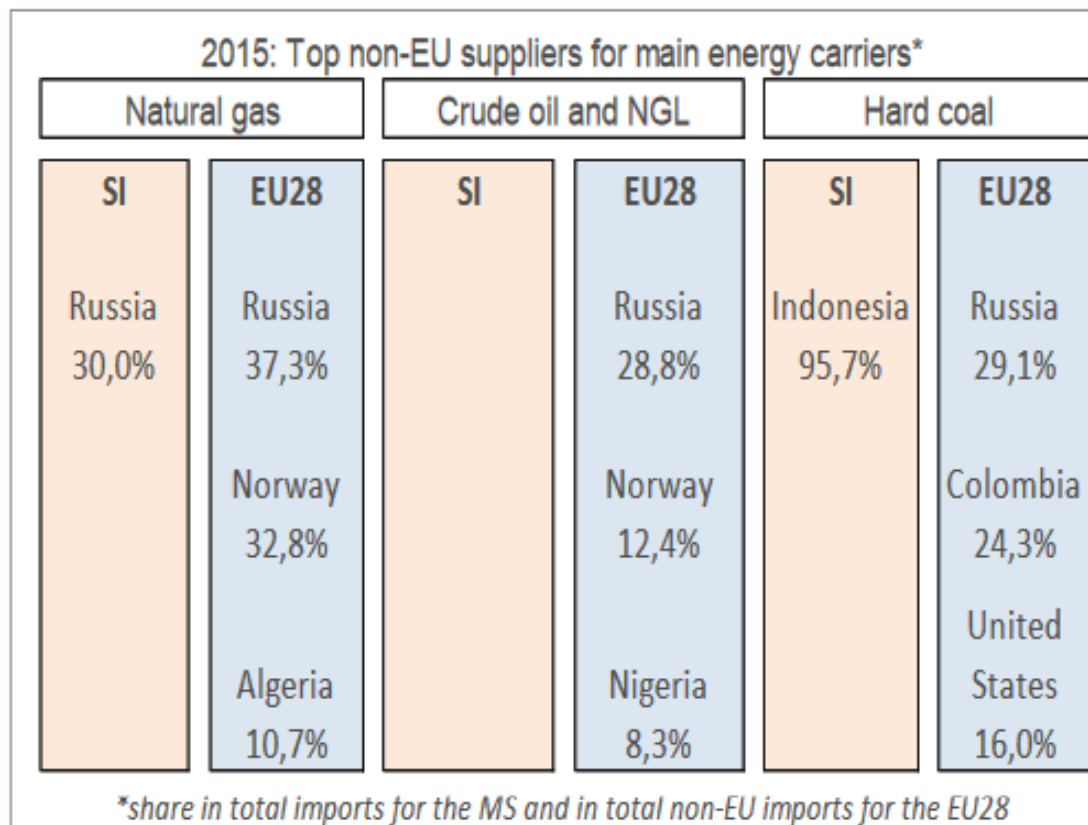
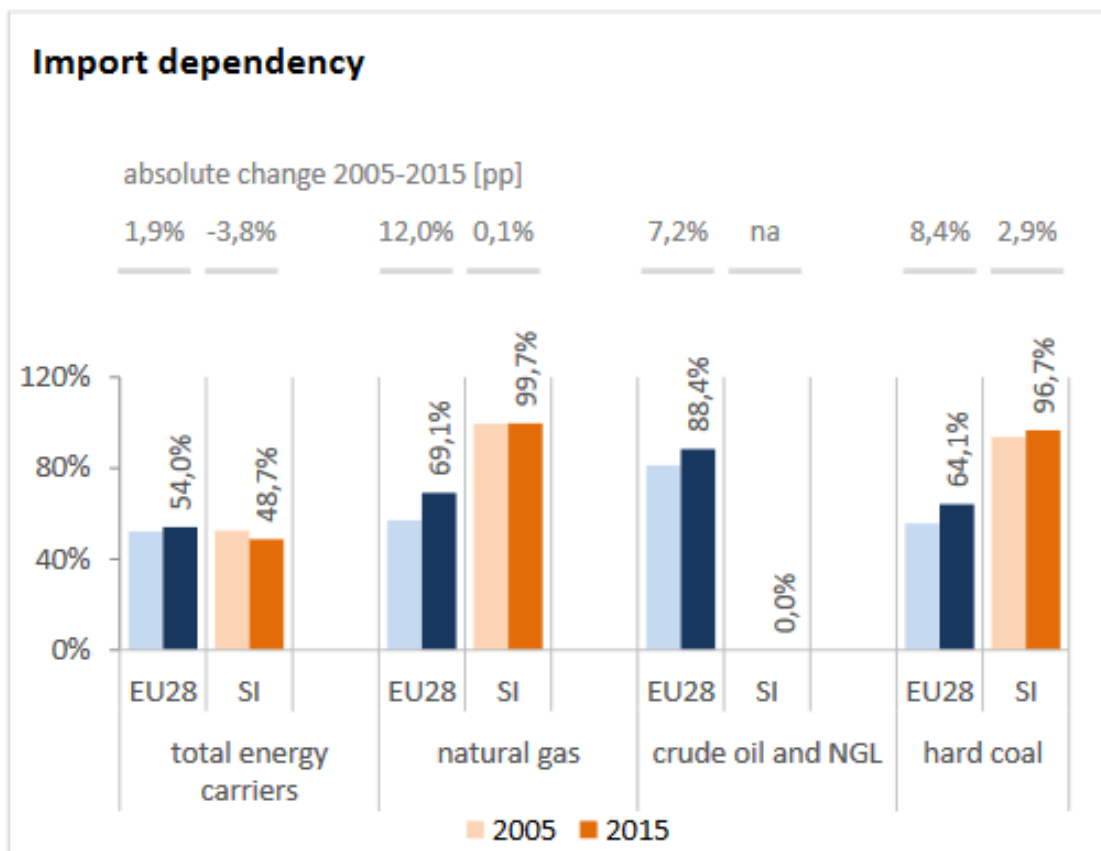


(Source: Energy Union Factsheet
Slovenia, 2017)

*energy mix as share share in GIC-excluding electricity and derived heat exchanges , GIC=gross inland consumption

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(Source: Energy Union Factsheet Slovenia, 2017)

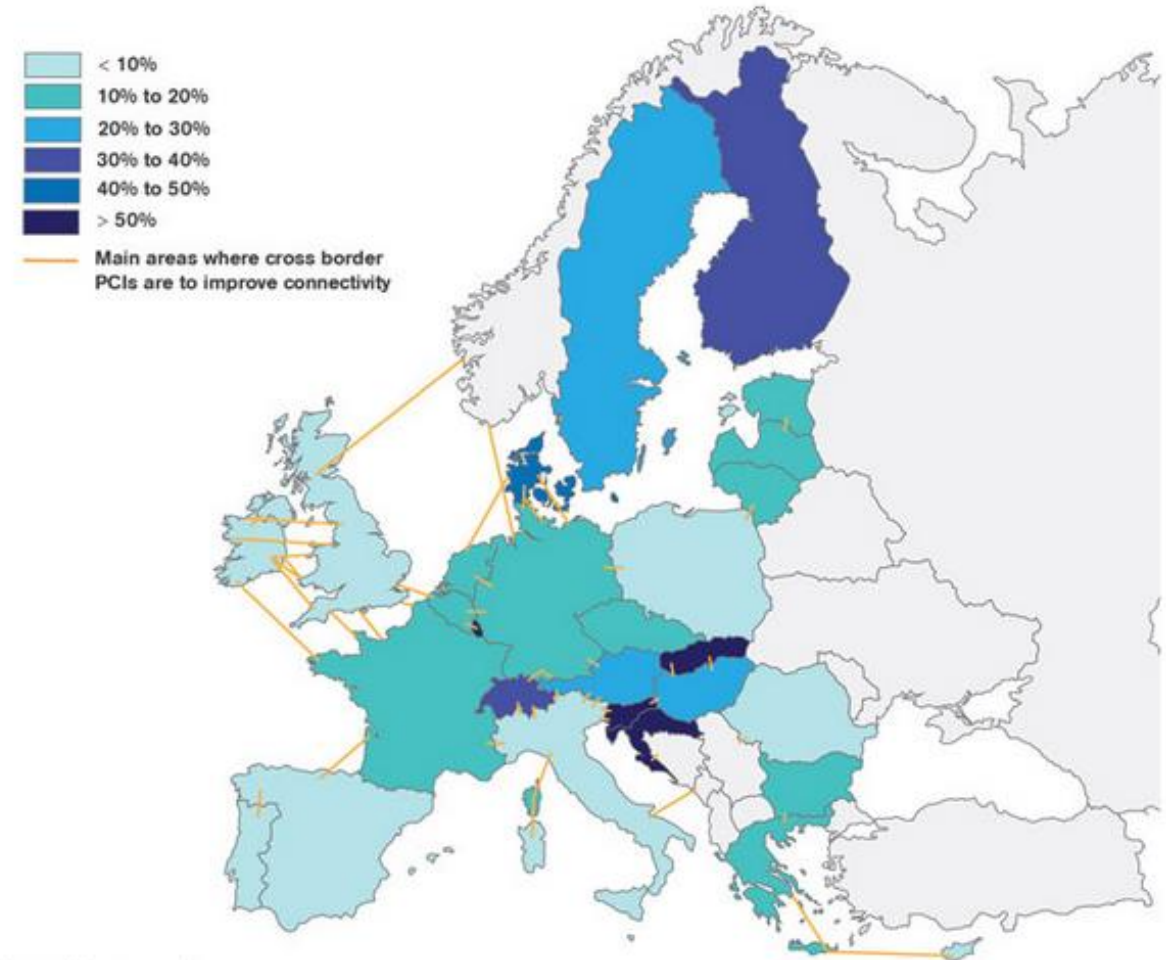
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Key figures

1. **12 EU Member States**^[1] do not meet the EU's **minimum interconnection target** – that at least 10% of installed electricity production capacity be able to "cross borders". The EU has listed 137 electricity projects, including 35 on electricity interconnection: between them, these projects could bring that figure from 12 down to 2 Member States.
2. An appropriately interconnected European energy grid could save consumers up to **€40 billion a year**.

^[1] Cyprus, Estonia, Ireland, Italy, Lithuania, Latvia, Malta, Poland, Portugal, Romania, Spain, United Kingdom



Source: ENTSO-E via European Commission Communication "Achieving the 10% electricity interconnection target" (COM(2015) 82).

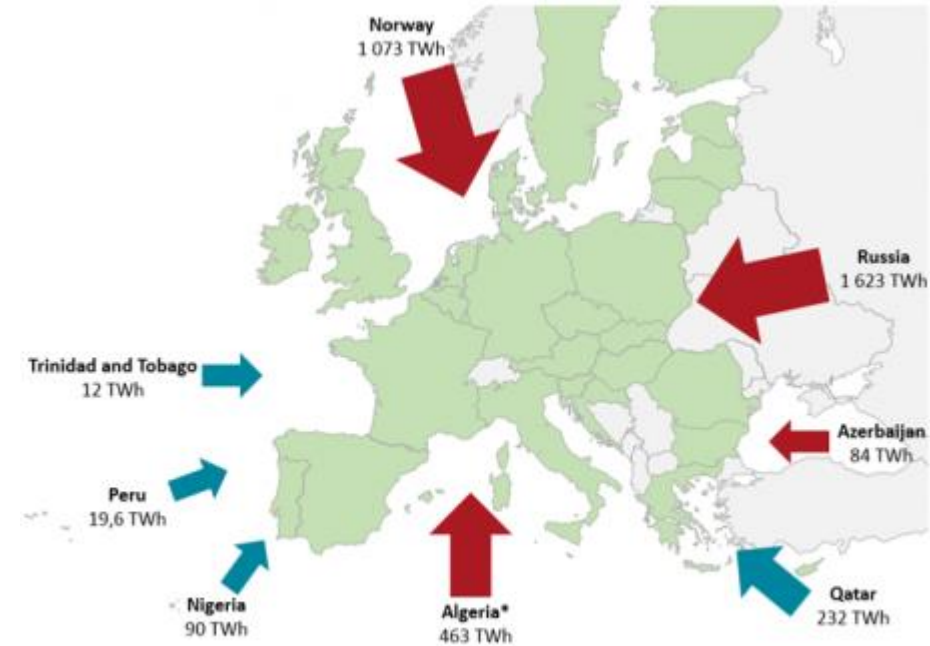
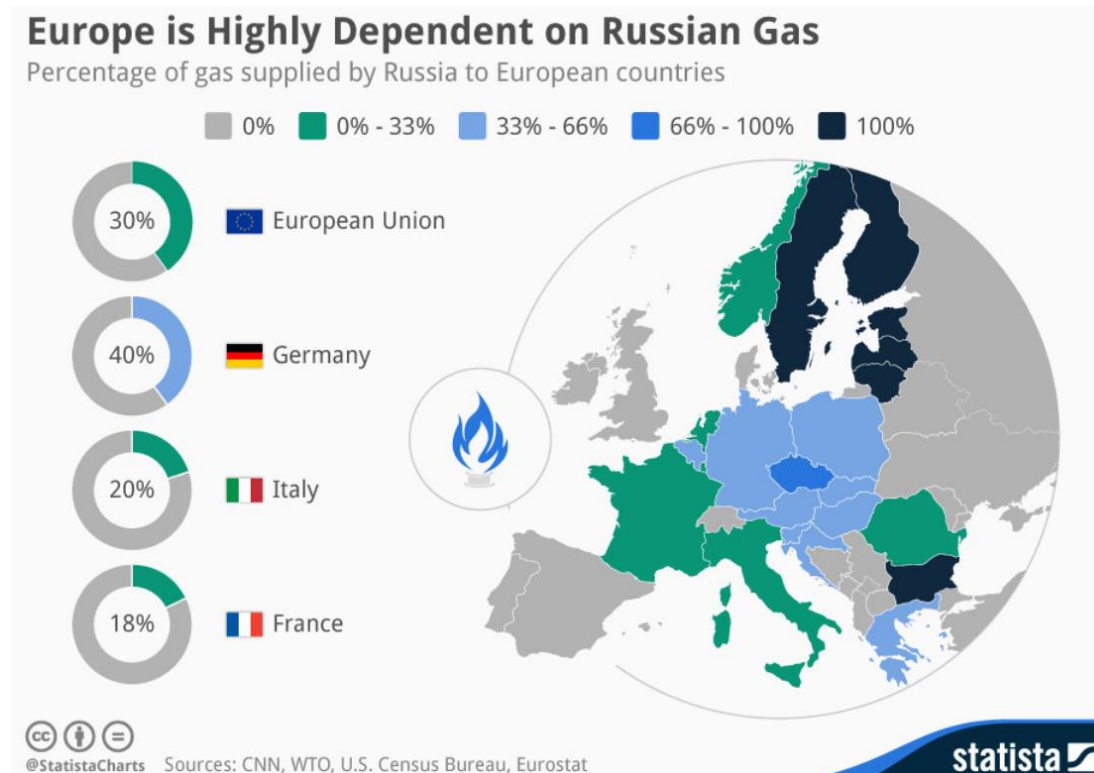
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Key figures

1. 6 EU Member States^[2] are dependent on one single external supplier for all their gas imports.

^[2] Bulgaria, Estonia, Finland, Latvia, Lithuania, Slovakia



Source: BP Statistical Review of World Energy (June 2017)

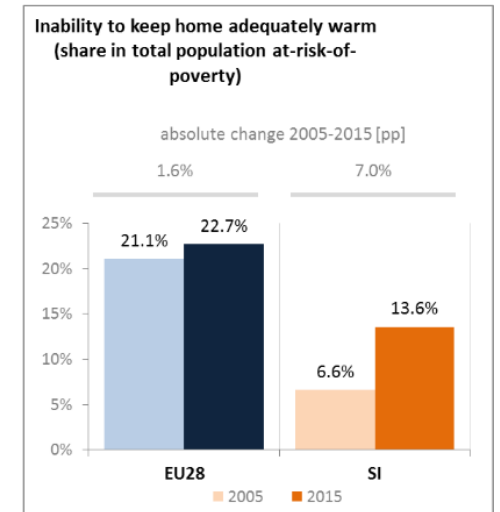
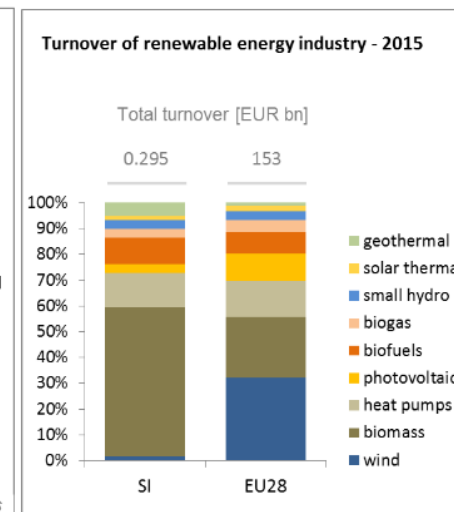
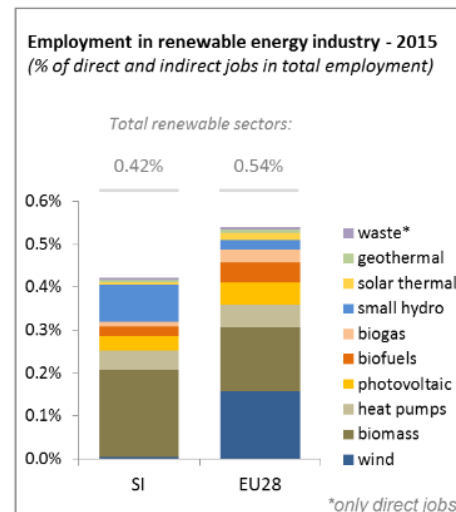
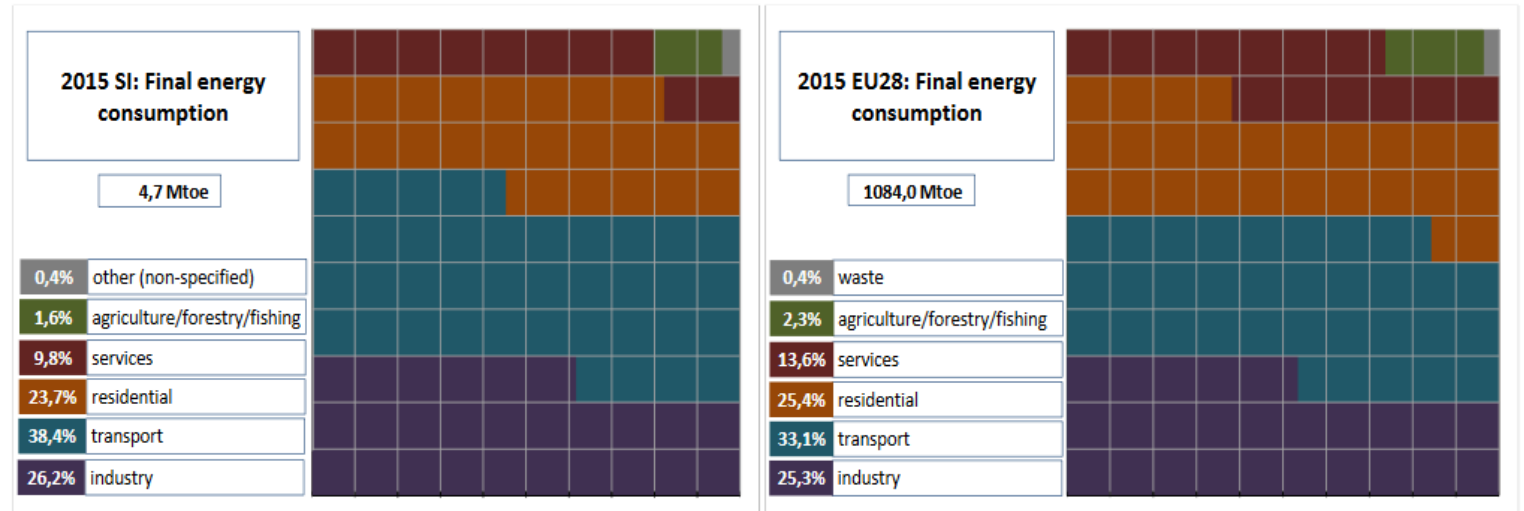
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Key figures

- 75% of our **housing stock is energy inefficient**; 94% of **transport** relies on **oil products**, of which **90% is imported**.
- Over **€1 trillion needs** to be invested into the EU energy sector **by 2020 alone**.
- Wholesale electricity prices** in Europe are **30% higher**, and **wholesale gas prices** over **100% higher**, than in the US.
- European renewable energy businesses** have a combined annual turnover of **€129 billion**, employing over a million people. The challenge is to retain Europe's leading role in global investment in renewable energy.

(Source: Energy Union Factsheet Slovenia, 2017)



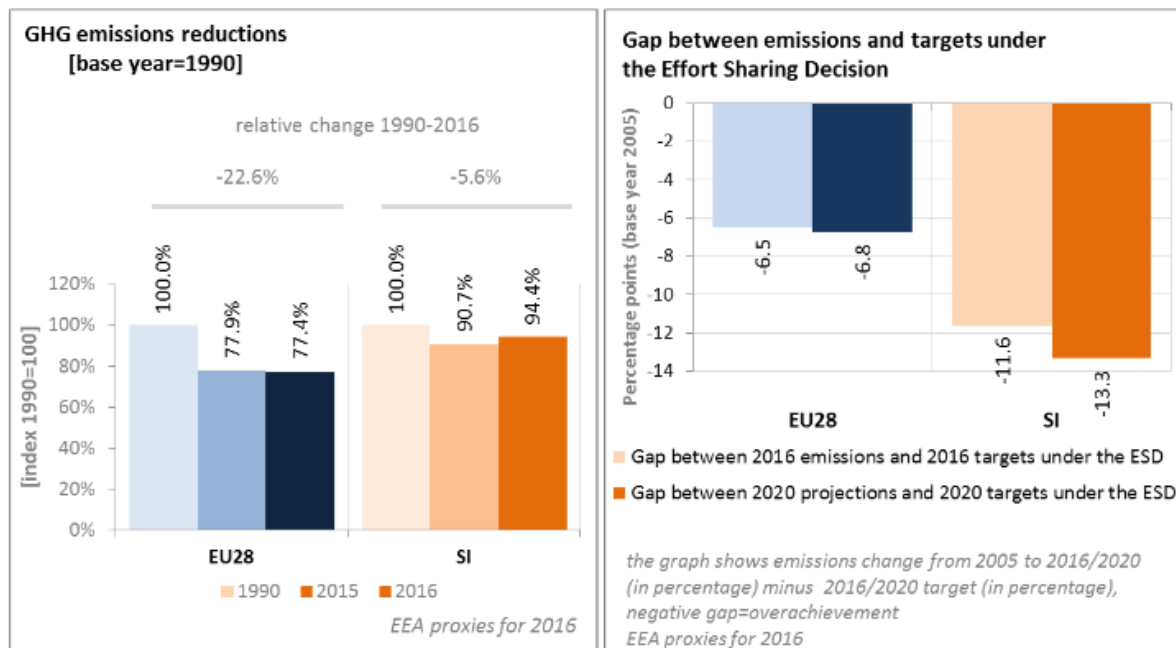
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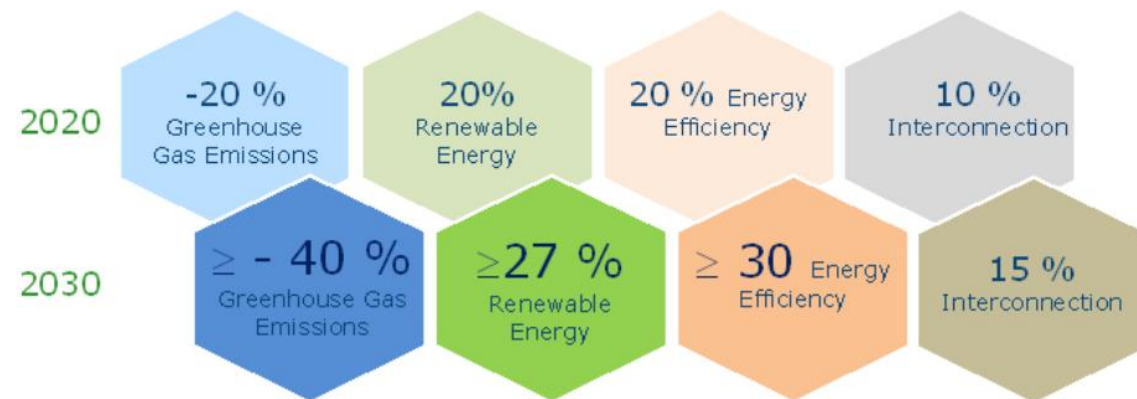
Key figures

EU greenhouse gas emissions fell 18% in the period 1990-2011.

By 2030, the EU aims to cut greenhouse gas emissions by at least 40%, boost renewable energy by at least 27%, and improve energy efficiency by at least 27%.



2030 Framework for Energy and Climate - Agreed headline targets



(Source: State of the Energy Union, 2017)

(Source: Energy Union Factsheet Slovenia, 2017)

2. EU energy policy/union – development & short overview (i)

European Communities

- to *"make war not only unthinkable but materially impossible,,* (**Schuman Declaration**, 1950)
- **ECSC** 1951; **EURATOM** 1957

Single European Act, 1986

- Set the objective of establishing a **Single Market**
- Codified competencies in the field of **environmental policy**

Development of the energy legislation

- **First energy package**, 1996 (electricity) and 1998 (gas)
- **Second energy package**, 2003 (bottom-up approach to creation of the legislation proposals)
- **Third energy package**, 2009 (**competitive – sustainable – secure energy**)

Three pillars/objectives of the EU energy policy



(Source: European Commission, 2017)

2. EU energy policy/union – development & short overview (ii)

2005

- Hampton Court: [T. Blair](#) presented a **plan to create a common EU energy policy**
- Better interconnection; EU-wide cooperation on gas storage, exchange of information on security of supply, Europe's lead in climate change policies

2006

- **Commission's Green Paper**: [A European Strategy for Sustainable, Competitive and Secure Energy](#)
- **Six EU energy priority areas**
 - internal energy market; solidarity; competitiveness; climate change; energy innovation; coherent external energy policy

2007

- [Communication from the Commission to the European Council and the European Parliament - An energy policy for Europe](#)
- [European Council \(march 2007\)](#): **An integrated climate and energy policy** (Action plan 2007-09) (**goals 20-20-20-10 till 2020**)
- (september) EC presents the [Third energy legislation package](#)

2008

- Commission **legislation proposals**: ETS directive revision, *"Effort-Sharing Decision"*, *Renewable Energy Directive*
- november: [Second Strategic Energy Review](#)

2009

- **Lisbon Treaty** (Article 194 – energy)
- Adoption of the climate and energy legislation

2. EU energy policy/union – development & short overview (iii)

2010

- **DG ENER (Oettinger/Baroso II)**
- (november) Communication from the Commission: [Energy 2020 A strategy for competitive, sustainable and secure energy](#)
- **5 priorities: energy efficiency; pan-European energy market; consumer rights and safety; SET-plan; good external energy relations**

2011

- EC: [COMMUNICATION FROM THE COMMISSION A Roadmap for moving to a competitive low carbon economy in 2050](#)
- **Reducing GHG: -40% till 2030; -80% till 2050**
- EC: [Energy Roadmap 2050: new decarbonised energy system in 2050](#)
- Setting the **2030 framework?**

2012

- **MS disagree on how to proceed**
- ENVI Council, march 2012 & TTE (Energy) Council, june 2012: veto Poland

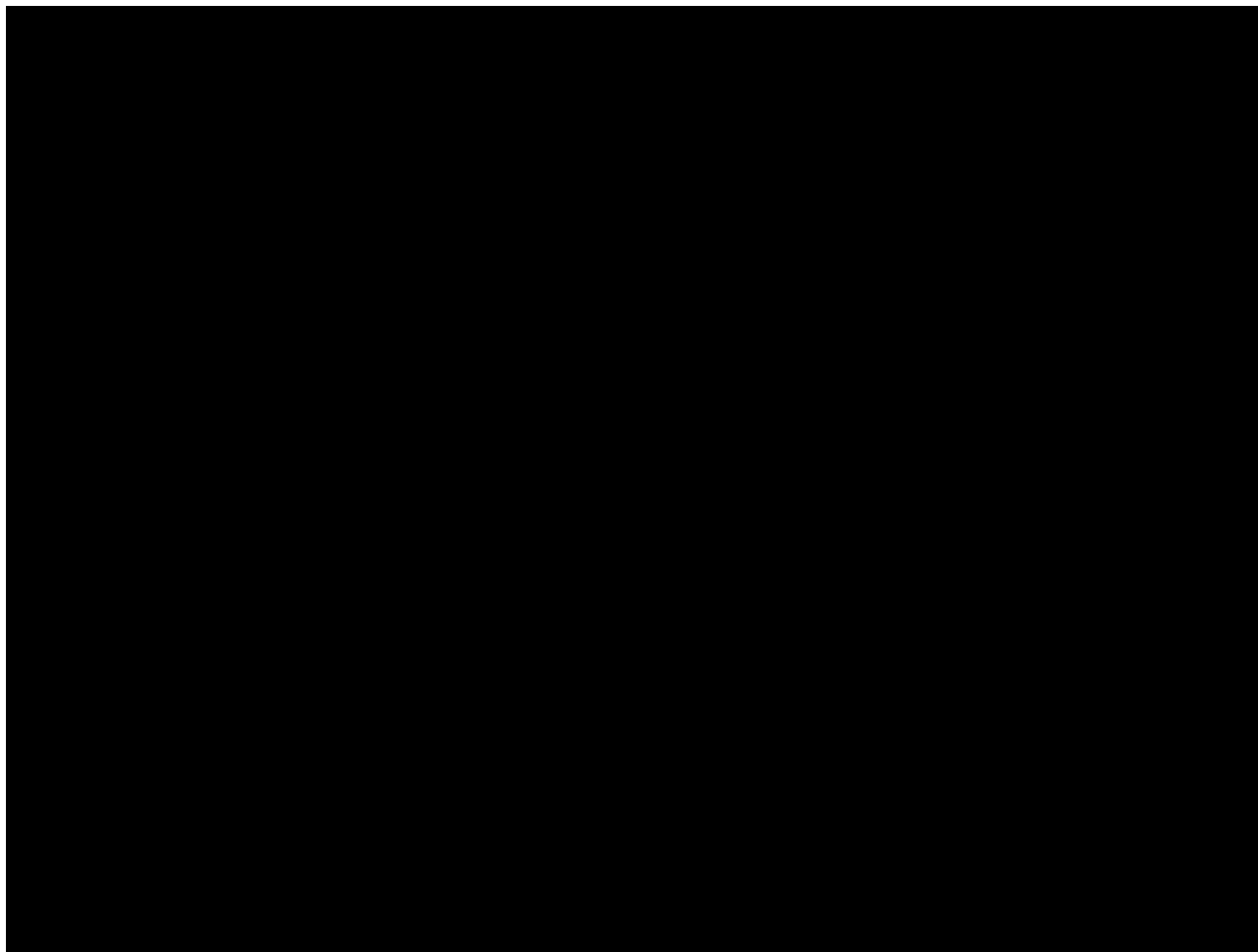
2013

- EC initiates a **wide consultation**: [GREEN PAPER A 2030 framework for climate and energy policies](#)
- European Council (march): no conclusions regarding 2030 goals

2014

- Communication from the Commission (january): [A policy framework for climate and energy in the period from 2020 to 2030](#)
- European Council (October): [Conclusions on 2030 climate and energy policy framework](#)
- **-40 % GHG till 2030; at least 27% RES (EU level) till 2030; 27 % EE (EU level)**
- April 2014: D. Tusk → **„Energy union“ concept** (? security of gas supply due to RUS-UKR crisis & reducing EU energy dependence)

#EnergyUnion



EU Energy policy: legal basis

1. **Article 194 of the Lisbon Treaty**

2. Special provisions:

- **security of energy supply**: article 122 TFEU;
- **energy networks**: articles 170-172 TFEU;
- **coal**: protocol no. 37 explains financial consequences of the termination of the Treaty on the CSC in 2002;
- **nuclear energy**: Euratom Treaty represents the legal basis for most EU measures in the nuclear field

3. Other provisions influencing the EU energy policy:

- **common internal market**: article 114 TFEU;
- **external energy policy**: articles 216-218 TFEU

Consolidated Version Of The Treaty On The Functioning Of The European Union
Part Three
Union Policies And Internal Actions, Title XXI, Energy
Article 194

1. In the context of the establishment and functioning of the internal market and with regard for the need to preserve and improve the environment, **Union policy on energy shall aim**, in a spirit of solidarity between Member States, **to**:

- (a) ensure the functioning of the energy market;
- (b) ensure security of energy supply in the Union;
- (c) promote energy efficiency and energy saving and the development of new and renewable forms of energy; and
- (d) promote the interconnection of energy networks.

2. Without prejudice to the application of other provisions of the Treaties, the European Parliament and the Council, acting in accordance with **the ordinary legislative procedure**, shall establish the measures necessary to achieve the objectives in paragraph 1. Such measures shall be adopted after consultation of the Economic and Social Committee and the Committee of the Regions.

Such measures shall not affect a **Member State's right to determine** the conditions for exploiting its energy resources, its choice between different energy sources and **the general structure of its energy supply**, without prejudice to Article 192(2)(c).

3. By way of derogation from paragraph 2, the Council, acting in accordance with a special legislative procedure, shall unanimously and after consulting the European Parliament, establish the measures referred to therein when they are primarily of a fiscal nature.

EU Energy Union – short overview (i)

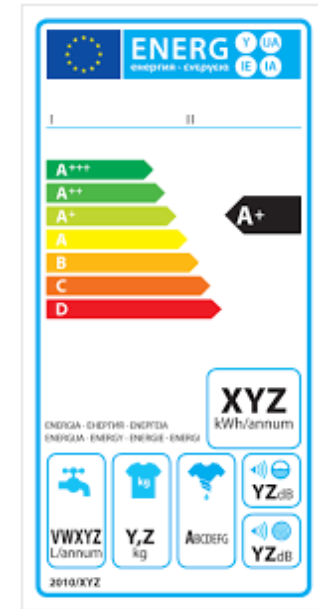


- April 2014: concept of the EU Energy Union (D. Tusk)
- June 2014: Juncker sets „*Resilient energy Union with a forward looking climate policy*“ as one of the priorities of the coming Commission
 - [Vice-President Maroš Šefčovič: Energy union and climate](#)
 - [Miguel Arias Cañete: EU Climate Action Energy Policies](#)
- February 2015: [Communication from the Commission: A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy](#) – 5 dimensions:
 1. **Energy security**, solidarity and trust;
 2. A fully integrated European **energy market**;
 3. **Energy efficiency** contributing to moderation of demand;
 4. **Decarbonising** the economy, and
 5. **Research, Innovation** and Competitiveness
- December 2015: [First Report on the State of the Energy Union](#)
- Februar 2017: [Second Report on the State of the Energy Union](#)
- **November 2017: [Third Report on the State of the Energy Union](#)**
 - [Energy Union factsheets for EU countries](#)
 - [Slovenia: Energy Union factsheet](#)



EU Energy Union – short overview (ii)

- **July 2015:** [the Commission's Summer Energy Package:](#)
 - **Two legislative proposals**
 - Revised Directive on **ETS allowances** after 2020, amending Directive 2003/87/EC
 - new regulation on **energy labelling** replacing Directive 2010/30/EU
 - Two non-legislative communications proposing:
 - a **new deal for energy consumers** and
 - launching the public consultation on a **new energy market design**
- **February 2016:** [The Commission presents energy security package:](#)
 - **Two legislative proposals**
 - A decision on Intergovernmental Agreements in energy (**IGAs**)
 - Security of Gas Supply Regulation (**SoS**)
 - Two non-legislative communications
 - Liquefied natural gas (LNG) and gas storage strategy
 - Heating and Cooling strategy
- **November 2016:** [Clean Energy for all Europeans](#)



Clean Energy for all Europeans

- **Electricity market and consumers**

1. Proposal for a revised **electricity Directive**

- [Stališče RS \(24. 02. 2017\)](#)

2. Proposal for a revised **electricity regulation**

- [Stališče RS \(24. 2. 2017\)](#)

3. Proposal for a new regulation on **risk preparedness in the electricity sector**

- [Stališče RS \(23. 02. 2017\)](#)

4. Proposal for a revised regulation on a European Agency for the **Cooperation of Energy Regulators (ACER)**

- [Stališče RS \(13. 01. 2017\)](#)

- **Energy Efficiency**

5. Proposal for a revised **energy efficiency Directive**

- [Stališče RS \(13. 01. 2017\)](#)

6. Proposal for a revised **energy performance of buildings Directive**

- [Stališče RS \(24. 01. 2017\)](#)

- **Renewables & bioenergy sustainability**

7. Proposal for a revised **Renewable Energy Directive**

- [Stališče RS \(13. 02. 2017\)](#)

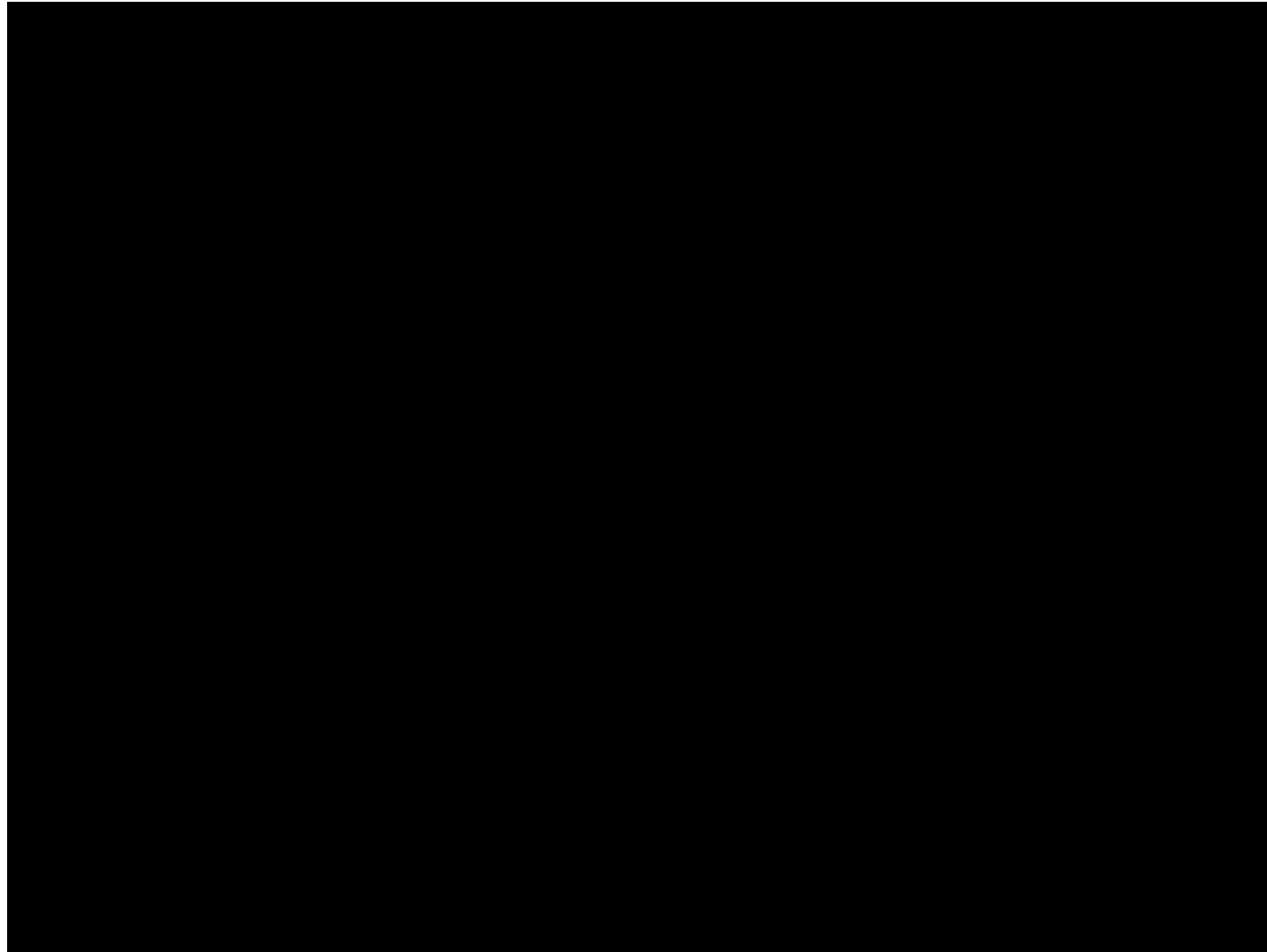
- **Governance**

8. Proposal for a regulation on the **Governance of the Energy Union**

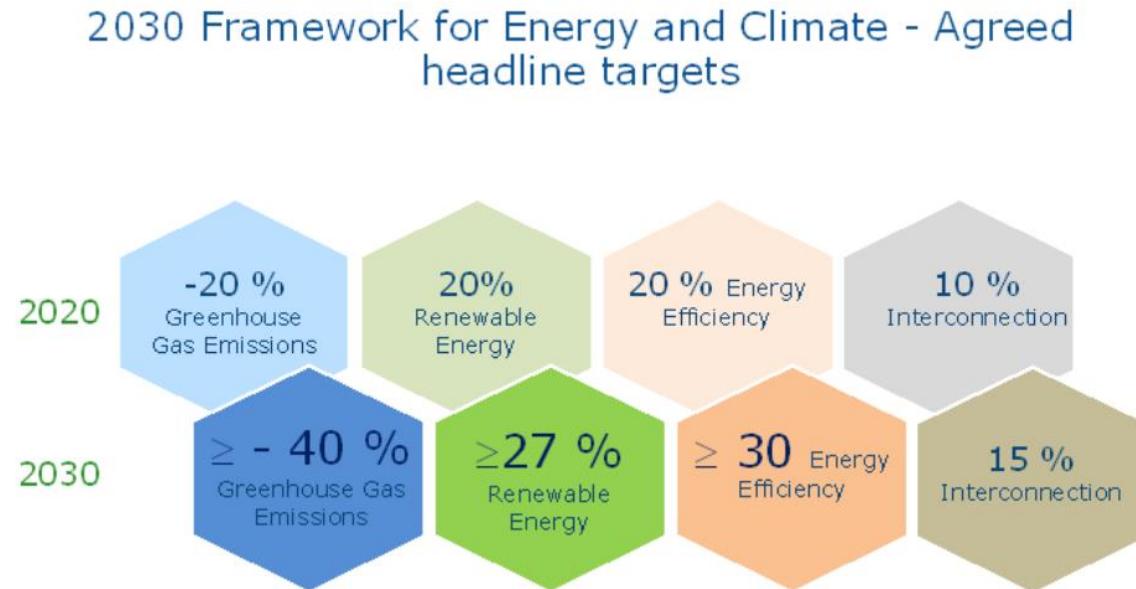
- [Stališče RS \(18. 01. 2017\)](#)



EU Energy Union and Climate



3. Climate change and the EU Energy Union Governance



(Source: State of the Energy Union, 2017)

European Council

- EU objective for 2050 – GHG emissions down to 80-95% below 1990 levels
- Looks forward to elaboration of a low-carbon 2050 strategy – a framework for longer-term action in energy and related sectors

3. Climate change and the EU Energy Union Governance (i)

Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the Governance of the Energy Union

Article 1

Subject matter and scope

1. This Regulation establishes a **Governance mechanism** to:

(a) implement strategies and measures designed **to meet the objectives and targets of the Energy Union**, and for the first **ten-year period** from 2021 to 2030 in particular **the EU's 2030 targets for energy and climate**;

(b) ensure the timeliness, transparency, accuracy, consistency, comparability and completeness of reporting by the Union and its Member States to the UNFCCC and Paris Agreement secretariat.

The governance mechanism shall be **based on integrated national energy and climate plans** covering ten-year periods starting from 2021 to 2030, corresponding integrated national energy and climate progress reports by the Member States and integrated monitoring arrangements by the European Commission. It shall define a **structured, iterative process between the Commission and Member States** in view of the **finalisation of the national plans** and their subsequent **implementation**, including with regard to **regional cooperation**, and corresponding **Commission action**.

2. This Regulation shall apply to the following **five dimensions of the Energy Union**:

(a) energy security,

(b) energy market,

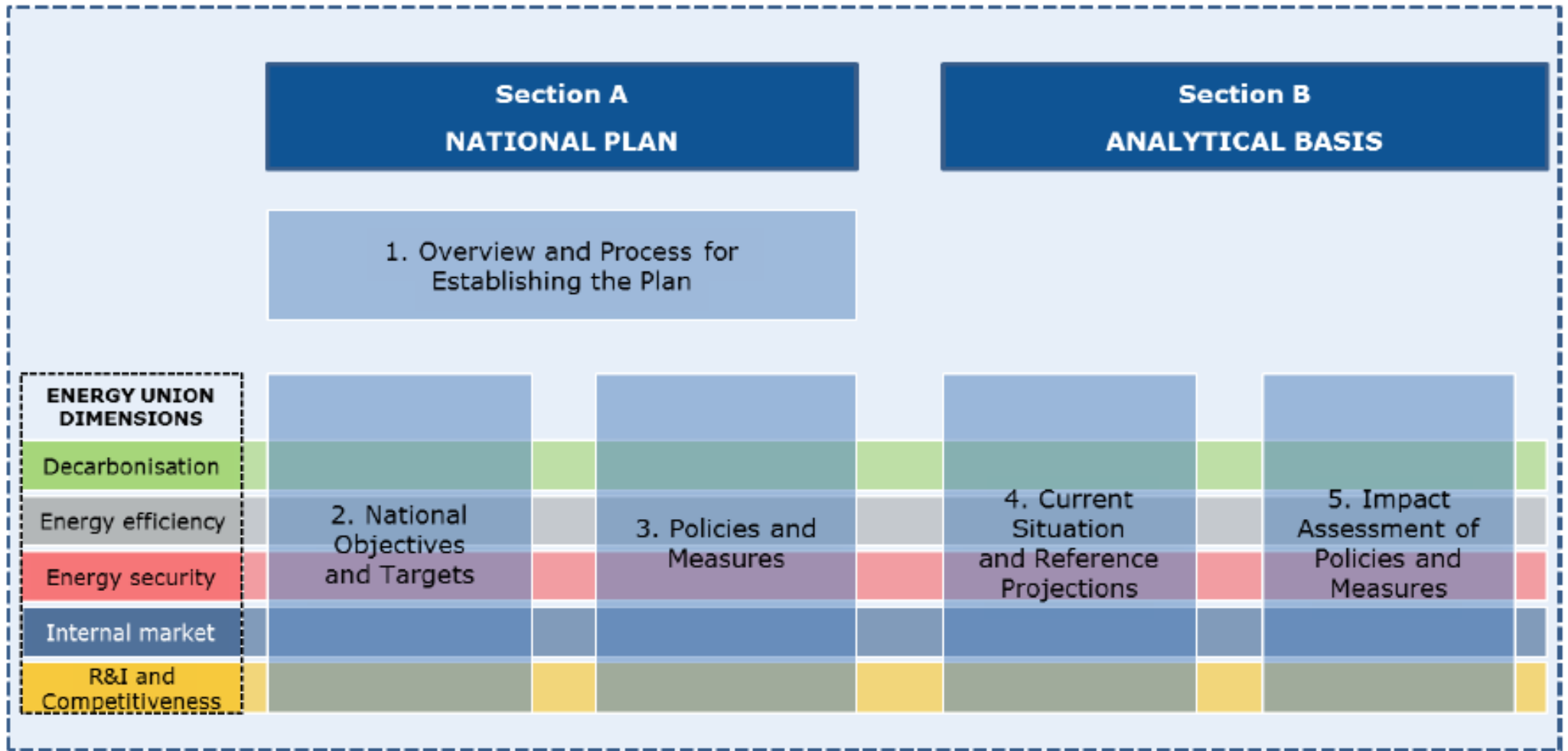
(c) **energy efficiency**,

(d) **decarbonisation** and

(e) research, innovation and competitiveness.

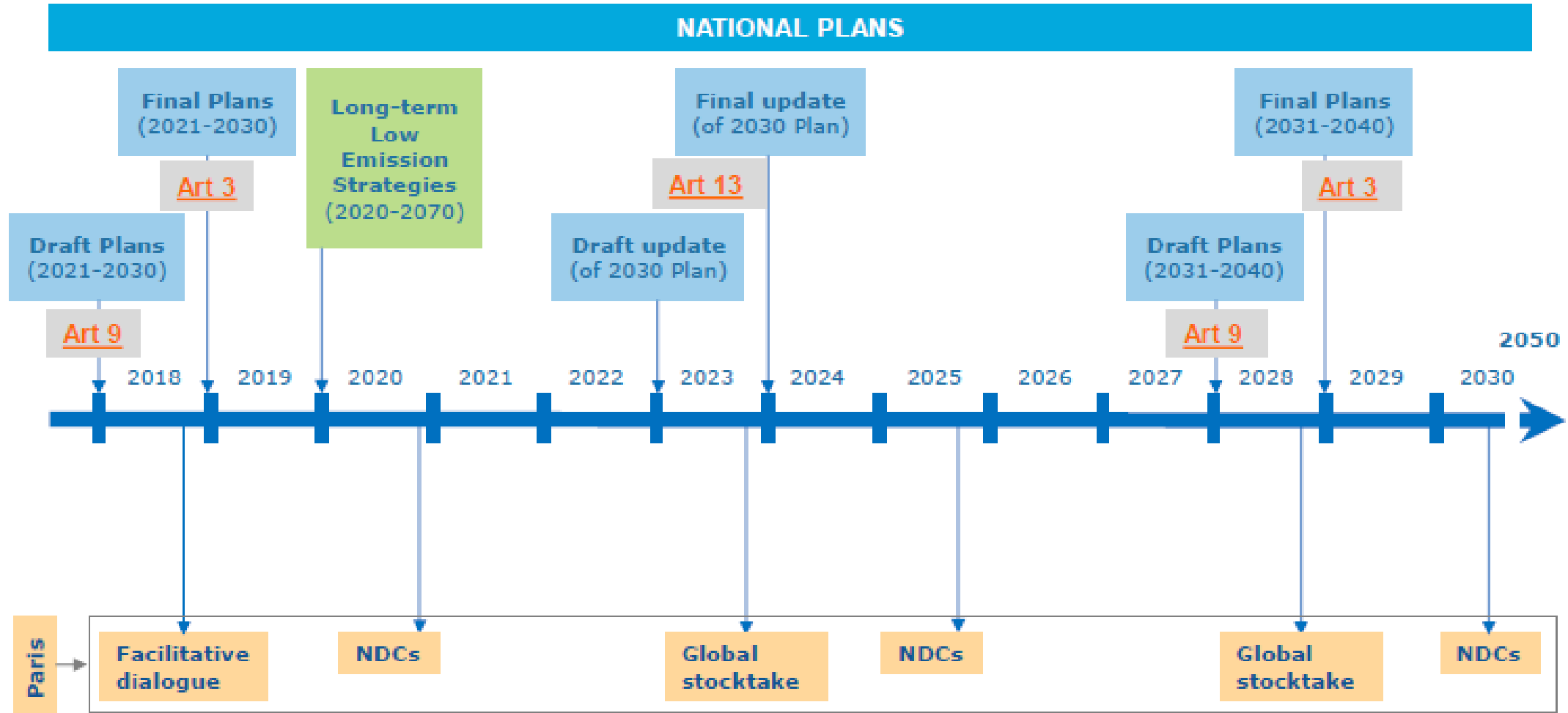
3. Climate change and the EU Energy Union Governance (ii)

Art 3: Structure of the NECPs covering main elements of the five dimensions



3. Climate change and the EU Energy Union Governance (iii)

PROCESS OF THE PROPOSED REGULATION



3. Climate change and the EU Energy Union Governance (iv)

- The current state of play on main issues (preparation of third trilogue):
 - **Climate issues** (*inter alia*):
 - Energy Union / Climate Change committee
 - Methane strategy
 - **Energy issues** (*inter alia*):
 - main objectives, targets and contributions of the national plans, and the related reporting provisions
 - **Member States' contribution setting process in the area of renewable energy**
 - draft national plans – timeline
 - Multilevel Climate and Energy Dialogue Platform
 - Commission recommendations
 - political monitoring of the governance
 - 'energy poverty'
- *Based on desk research prepare a short presentation of your country's position on "EU Energy Union and Climate". If you come from a non-EU member state, chose and prepare a presentation on the position of the European Parliament, European Commission or other relevant EU stakeholders (NGOs, business, etc.).*

Case of Slovenia: Challenges

- **Renewables**

- **Natura 2000** covers **38% of our territory**: barriers for exploitation of hydro potential!
- Conflict between protection of **Natura and RES goals** at EU level
 - Highest share of Natura 2000 in the EU
 - RES investments are not clear and more expensive
- costs of habitats protection should not be turned over to investors (long-term monitoring, various detailed studies, etc.)
- We're on track (?) to meet the 2020 target (2014 – 21.9%; target 2020: 25%) but difficult to increase the share due to lengthy and costly procedures

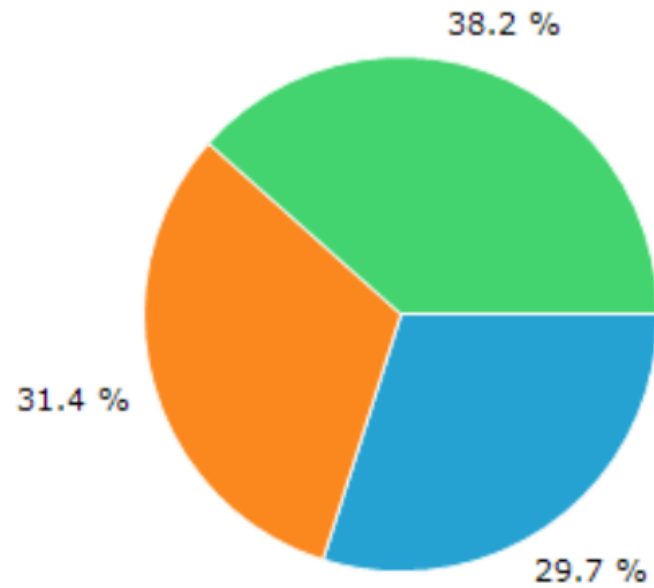
- In order to meet our climate targets in 2050

- **More effort to ease exploitation of hydro and other RE potential**
- **RES** and nuclear energy as pillars

- **Transport** most energy-intensive sector → its share in energy consumption increasing since 2005

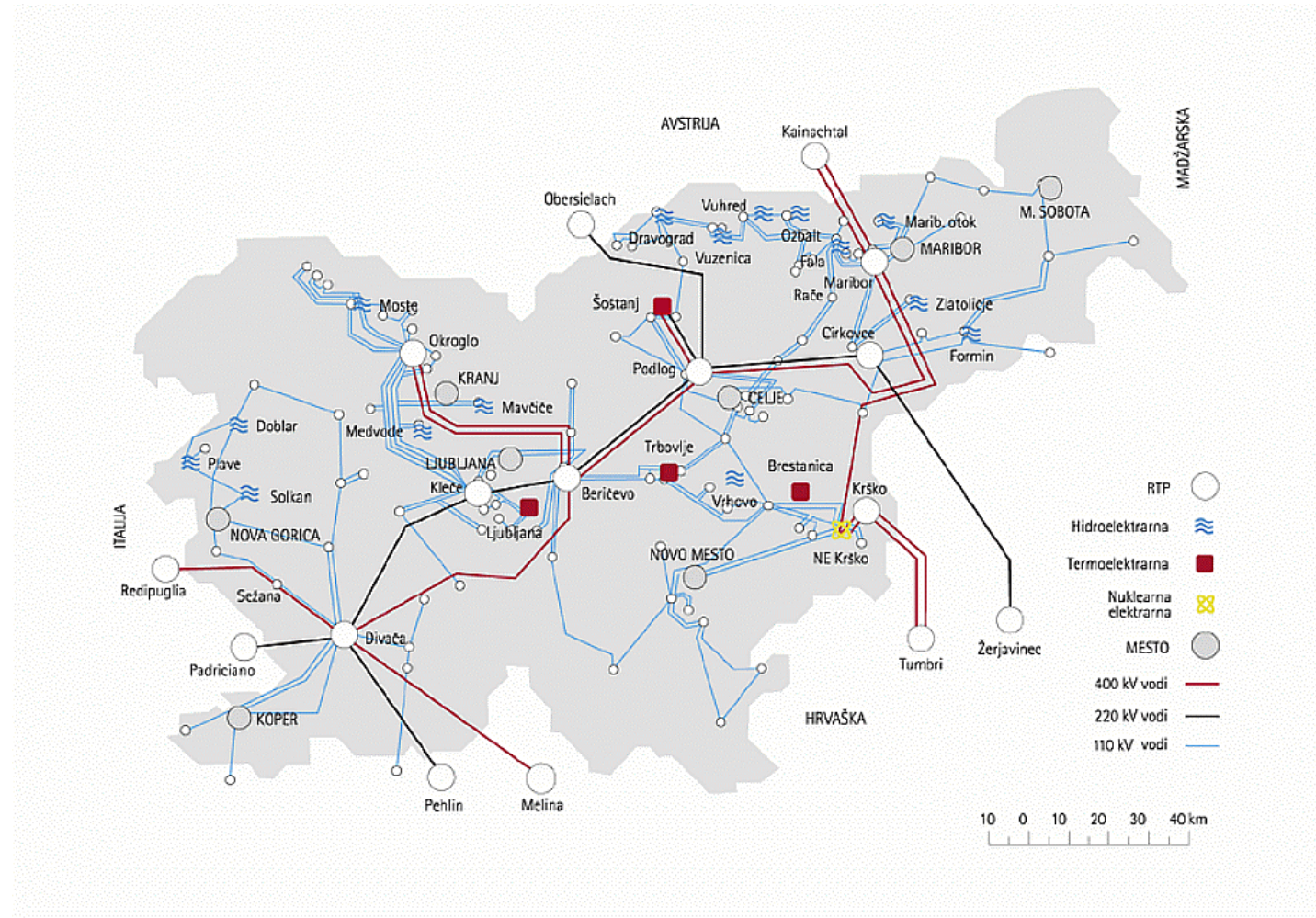
Case of Slovenia: Larger Generators of Electricity (more than 100 MW of generation power)

Net electricity production, Slovenia, January 2018



Source: SURS

- hydro
- thermal
- nuclear



ELES.SI, 2016