

**European Energy Policies & Emissions Targets  
in the wake of COP-21.  
CERALE Conference, Paris.  
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## Recent Background

**2009: COP-15 Copenhagen – turned from ‘Hopenhagen’ to “disarray” and the Copenhagen Accord was noted but not adopted. 40,000 people attended.**

**2011: COP-17 Durban – agreed to develop protocol to be adopted at COP-21. 12,500 people attended: over 5,400 government officials; 5,800 from UN, IGOs and NGOs; and 1,200 media representatives.**

**2014: COP-20 Lima – progress on negotiating agreement discussed. 15,000 people attended.**

**2015: Further meetings of the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP) took place in February (Geneva); June, August and October in Bonn to prepare revised “non-paper” for COP-21 in Paris**

## **COP - 21**

- **Attended by over 150 Heads of State & Government.**
- **23,100 government officials were present (over 100 per country, on average!).**
- **9,400 people representing UN bodies, IGOs, and NGOs.**
- **3,700 media representatives.**

**The Text forwarded to COP-21 was mostly bracketed, with disagreement on the long-term temperature goal, response measures, loss and damage issues, and differentiation of responsibilities and commitments.**

# COP -21 OUTCOMES

- Paris Agreement adopted.
- Sought to limit near surface temperature rise to below 2 degrees Celsius, and below 1.5 if possible.
- Several Parties regarded 2 degree goal inadequate.
- Agreed to enhance technology development.
- National adaptation plans to be encouraged.
- Implementation of capacity building framework to be reviewed.
- Guidance on reducing emissions from deforestation or forest degradation in developing countries to be provided.
- Goal of providing \$100 billion to developing countries agreed (apparently!).
- Parties need to act “urgently and ambitiously”.

## **EU involvement in preparatory ADP debates:**

- Disputed DC claims that developed countries have yet to meet their UNFCCC Convention or Kyoto Protocol obligations re: mitigation and means of implementation.**
- All countries should seek economy-wide targets, but there should not be shared timetables.**
- Sought clarification of date for submissions.**
- Agreed need for more institutional support.**
- Supported common framework for reporting.**
- Opposed China's proposal for increased ambition and Kyoto Protocol commitments.**
- Among those opposed to further response measures under Kyoto Protocol clauses 2.3 and 3.14 [they refer to minimising impacts on developing country Parties], including capacity building, and sought inclusion of a pre-2020 focus.**

# Advances in 2015 for UN Development Agenda

- **2030 Agenda for Sustainable Development adopted, including its Sustainable Development Goals. [Hopelessly over-optimistic: eradicate extreme poverty everywhere by 2030; end hunger & ensure access for everyone to safe & sufficient food by 2030; end epidemics by 2030; ensure universal access to affordable, reliable, modern energy services for all, double rate of energy efficiency improvement, & increase substantially the share of renewable energy in global energy mix by 2030.]**
- **Addis Ababa Action Agenda on financing for development.**
- **Paris Agreement adopted.**
- **Global stocktake every five years.**
- **BUT .....**

## **BUT: .....**

- **Concern expressed at gap between Parties' pledges and holding temperature rise to 2 degrees Celsius.**
- **Parties still not accounting fully for their nationally determined emissions.**
- **At any time after three years from the date when Agreement enters into force Parties may withdraw from the Agreement by giving written notification.**
- **Withdrawal will take effect one year after withdrawal letter received.**

## Earth Negotiations Bulletin Assessment

- COP – 21 exceeded expectations.
- But concern that outcome would be watered-down or rendered meaningless.
- Positive on opportunities for technological developments, innovation & investments.
- Sought to involve both State and non-State actors.
- Various institutions were launched or strengthened in Paris (e.g. the private investor-led US\$2 billion Breakthrough Energy Coalition; India's International Solar Alliance).
- Multilateralism given “new faith”.

# The response of some scientists to COP-21:

“ The hollow cheering of success at the end of COP-21 proved yet again that people will hear what they want to hear and disregard the rest. What they disregarded were the deadly flaws lying just beneath its veneer of success.

The solution it proposes is to kick the can down the road so that it can be picked up again in 2020.”

## UNFCCC Data on Aggregate GHG Emissions 1990-2013 (with LULUCF) of Annex I Parties made available at COP-21 (%)

<b>Austria</b>	<b>+ 13.7</b>	<b>Slovenia</b>	<b>- 19.4</b>
<b>Iceland</b>	<b>+ 8.2</b>	<b>Belgium</b>	<b>- 20.1</b>
<b>Spain</b>	<b>+ 7.8</b>	<b>Italy</b>	<b>- 21.8</b>
<b>Ireland</b>	<b>+ 2.3</b>	<b>Finland</b>	<b>- 22.9</b>
<b>Greece</b>	<b>- 0.8</b>	<b>Germany</b>	<b>- 23.1</b>
<b>Netherlands</b>	<b>- 10.3</b>	<b>Denmark</b>	<b>- 24.6</b>
<b>Portugal</b>	<b>- 10.5</b>	<b>UK</b>	<b>- 29.7</b>
<b>France</b>	<b>- 12.6</b>	<b>Sweden</b>	<b>- 54.0</b>
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<b>New Zealand</b>	<b>+ 42.4</b>	<b>Canada</b>	<b>+ 35.4</b>
<b>USA</b>	<b>+ 4.8</b>	<b>Russian Fed.</b>	<b>- 43.2</b>

# CARBON DIOXIDE EMISSIONS CHANGES 2015/2014

<b>Slovakia</b>	<b>+ 9.5</b>	<b>Netherlands</b>	<b>+ 2.1</b>
<b>Portugal</b>	<b>+ 8.6</b>	<b>France</b>	<b>+ 1.7</b>
<b>Hungary</b>	<b>+ 6.7</b>	<b>Germany</b>	<b>+ 1.1</b>
<b>Belgium</b>	<b>+ 4.7</b>	<b>Sweden</b>	<b>0.0</b>
<b>Ireland</b>	<b>+ 3.9</b>	<b>UK</b>	<b>- 2.9</b>
<b>Italy</b>	<b>+ 3.5</b>	<b>Greece</b>	<b>- 5.0</b>
<b>Austria</b>	<b>+ 3.3</b>	<b>Finland</b>	<b>- 7.4</b>
<b>Spain</b>	<b>+ 2.3</b>	<b>Denmark</b>	<b>- 7.9</b>

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**Germany needs to cut emissions 18% in next five years. *Energiewende* costs 1200 Euros per household and rising (\$35 billion in 2016, 31 billion Euros); grid system stressed; wind power subsidies still running at \$1.1 billion per year, though plans to cut capacity by 6,000 MW by 2019; RWE & E.ON in deep financial trouble. UK household energy costs are expected to rise by over £300 per year between 2014 and 2020. Result of subsidising renewables. Energy poverty rising.**

# EU 2030 “Framework”

## By 2030:

- Cut ghg emissions by at least 40% from 1990 levels.
- Achieve at least 27% share for renewable energy.
- Achieve at least a 27% improvement in energy efficiency (30% target for review in 2020).
- EU Emissions Trading System (ETS) has to cut emissions by 43% compared to 2005.
- Non-ETS sectors need to cut emissions by 30% compared to 2005. Binding targets for all EU Member States required.
- Requires an estimated 38 billion Euros annual additional investments, 2011 – 2030.
- But much of the 20% reduction in emissions 1990-2014 due to break-up of Former Soviet Union and EU accession of many of its members. EU emissions rose 1% 2015/2014.

# EU Energy Road Map to 2050

- **By 2050 EU should cut emissions 80% below 1990 levels by 2050.**
- **Cut these emissions by 40% by 2030.**
- **Cut them by 60% by 2040.**
- **“It will take decades to steer our energy systems onto a more secure and sustainable path.”**
- **Road map contains five scenarios.**
- **There are four main supporting documents.**
- **There are two Commission Staff Working Papers totalling 218 pages.**
- **The UK’s Climate Change Committee is seeking under its “Fifth Carbon Budget” to cut emissions by 57% by 2028/2033, and 80% by 2050. Described as “barmy”, it assumes 60% of cars will be electric, no coal, and no gas for heating or cooking, within 15 years.**

# CO2 emissions embedded in International Trade: League Table

1. China	11. France
2. USA	12. Australia
3. India	13. Turkey
4. Japan	14. Spain
5. Russia	15. Poland
6. Germany	16. Netherlands
7. Canada	17. Belgium
8. UK	18. Czech Republic
9. Korea	19. Greece
10. Italy	20. Austria

## Consumption-based CO2 emissions *per capita*: League Table.

1. Australia	11. Israel
2. USA	12. Korea
3. Canada	13. Japan
4. Luxembourg	14. Estonia
5. Saudi Arabia	16. Czech Republic
6. Belgium	17. Ireland
7. Switzerland	18. The Netherlands
8. Finland	19. UK
9. Norway	20= Greece
10. Austria	Sweden & Denmark

## Some Population Increase Comparisons 1990 - 2015

- Belgium, France, The Netherlands, Sweden and the UK experienced increases of around 13% to 14%.
- Germany experienced +2% (about 1.8 million), although it is not clear how many in the latest figures available were migrants/refugees.
- The UK's increase totalled 8 million, 53% of them immigrants, leaving England (which receives the vast majority of the latter) with a population density of 417 per square kilometre.
- Per capita emissions are rarely referred to, even though population changes may be significant.

## Comparison of UNFCCC and Consumption (Embedded) – Based CO<sub>2</sub> Emissions for UK (Mt. CO<sub>2</sub>)

	2000	2005	2010	2011	2012
UNFCCC	553.7	554.6	497.0	455.8	475.7
Consumption-based	790.1	877.0	744.8	696.1	710.8
Understatement:	30%	37%	33%	35%	33%

If estimated consumption-based emissions are compared to the UNFCCC actual for 1990 then UK CO<sub>2</sub> emissions fell only 11% 1990-2012, not 20% as claimed.

## **“Cans kicked down the road”**

- **Germany’s abandonment of nuclear (Belgium and Switzerland are also phasing out nuclear), switching back to coal (much of it lignite), and running into problems with gas-fired generation.**
- **Pressures to halt coal production and use.**
- **Limits to, costs, and opposition to Carbon Capture & Sequestration (CCS).**
- **Spreading problems for gas-fired electricity generation.**
- **Continued failure to expand gas storage (the UK in particular).**
- **Sub-optimal wind and solar energy developments (location and cost/subsidy issues).**
- **Biomass and biofuel issues.**
- **Estuarine barrage issues.**
- **Scarce metals issues impacting on wind turbines, solar PV, batteries (e.g. lithium).**
- **Barriers to Concentrated Solar Power (CSP).**

## Other cans lying in wait:

- **Power densities.**
- **Energy Return on Energy Invested (EROI).**
- **Escalating costs and rising fuel poverty.**
- **Population increase and movement.**
- **Institutional and political inadequacies.**
- **Climatic change uncertainties.**
- **Politicisation of the climatic change debate and the consequent narrowing of focus from a wider range of future challenges.**
- **Awakening realisation of the costs to be borne by current and near-term future generations, and lack of realism about targets within timetables.**

# Comments on EU Plans for Energy Union: 1

**“The Commission’s plan falls well short of what one would expect of a European Energy Union.”**

**D. Buchan & M. Keay: “Europe’s Long Energy Journey Towards an Energy Union?”, 2015. Oxford Univ. Press.**

**“The EU member states broadly agree on the need for comprehensive energy security, but there remains a lot of unfinished business (both internally and externally) to be resolved.”**

**S. Schubert et al. (eds.): “Energy Policy of the European Union”, 2016, Macmillan.**

## Comments on EU plans for an Energy Union: 2

**“Our knowledge is limited about whether the EU’s international commitment has implications for the EU’s own energy agenda.”**

**Jale Tuson et al. (eds.): “Energy Policy Making in the EU: Building the Agenda”, 2015, Springer.**

**“The EU’s own policies are marred by internal disputes, about goals, priorities, and policy instruments, and, in the context of the multi-year economic crisis, the costs. EU climate policy emerges from a ‘leaderless system of governance’.”**

**Andreas Goldthau & Nick Sitter: “A Liberal Actor in a Realist World: The EU Regulatory State and the Global Political Economy of Energy”, 2015, Oxford Univ. Press.**