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International Network for Sustainable Energy



Getting Ready for Zero Emissions and 100% Renewable Energy: Plans and Scenarios to Pave the Way for the Transition

10 December, 2015 - 11:15-12:45 - Room 2

**Side event to the UNFCCC COP21, Climate Generation Area,
Paris, France**

Bringing Plans and Scenarios into the Climate Strategies Beyond Paris by Paul Allen (CAT) and Isabel Bottoms (Track 0)



Centre for Alternative Technology
Canolfan y Dechnoleg Amgen

**ZERO
CARBON
BRITAIN**



The event was organised by Nordic Folkecenter for Renewable Energy (Denmark) & NegaWatt (France) in cooperation with INFORSE, Track 0, Centre for Alternative Technology –CAT (UK).

The event was part of the “Climate Generation Area” Conference organised by the French Government parallel to the UNFCCC COP21 - www.cop21.gouv.fr/en/les-espaces-generations-climat/

WHO'S GETTING READY FOR ZERO?

A report on the state of play of zero carbon modelling



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TRACK



WHO'S GETTING READY FOR ZERO?

Country	Who	What	URL
Australia	Beyond Zero Emissions	<i>Zero Carbon Australia</i>	http://bze.org.au/
Belgium	Vito & Belgian Federal Planning Bureau	<i>Towards 100% renewable energy in Belgium by 2050</i>	http://energie.wallonie.be/servlet/Repository/130419-backcasting-finalreport.pdf?ID=28161
Bhutan	Royal Government of Bhutan	<i>A national strategy and action plan for low carbon development</i>	http://www.ea-energianalyse.dk/reports/1148_bhutan_a_national_strategy_and_action_plan_for_low_carbon_development.pdf
Chile	Mitigation Action Plans & Scenarios (MAPS)	<i>MAPS Chile – Mitigation options for a low carbon development</i>	http://www.mapsprogramme.org/wp-content/uploads/Chile-Phase-2-Synthesis-of-Results-English-Final.pdf
Costa Rica	Costa Rica Climate Change Dep.	<i>Carbon Neutral by 2021</i>	http://www.cambioclimaticocr.com/2012-05-22-19-47-24/empresas-y-organizaciones-hacia-la-carbono-neutralidad-2021
Croatia	University of Zagreb	<i>Planning for a 100% independent energy system [in Croatia]</i>	http://www.sciencedirect.com/science/article/pii/S1359431111001463

Our new report *Who's Getting Ready for Zero?* maps out how different actors at national, regional and city levels are already modelling the elimination of GHGs on science-based timeframes compatible with 2°C. The report draws on results from over 100 scenarios that demonstrate how we can reach low or zero emissions before the second half of the century with existing technology and without harming social or economic development. We feature 27 of these in more detail to showcase work occurring in developed and developing countries, covering both low as well as full decarbonisation scenarios.

WHO'S GETTING READY FOR ZERO?

CASE STUDIES

GLOBAL



Who	World Wildlife Fund, Ecofys and the Office for Metropolitan Architecture
What	<i>The Energy Report – 100% Renewable Energy by 2050</i>
When	2011
Key	LOW CO ₂ NG

REGIONAL



Who	Lappeenranta University of Technology, Finland; Mizuho Information & Research Institute, Tokyo; Silla University, Korea & National University of Mongolia
What	<i>North–East Asian Super Grid: Renewable Energy Mix and Economics</i>
When	November 2014
Key	LOW NG

This research describes how the high growth rates of new renewable energy technology capacities enable the transformation of the energy system. It shows that North–East Asia has excellent solar resources, for example in the Gobi desert, which could be used to meet demand in highly populated areas of China, Korea and Japan. This study presents a spatially and hourly resolved energy system model for the region with a 100% renewable energy supply for the electricity demand.

COUNTRIES



Country	Ethiopia
Who	Federal Democratic Republic of Ethiopia
What	<i>The path to sustainable development – Ethiopia's Climate–Resilient Green Economy Strategy</i>
When	2011
Key	ZERO GHGs G

The government of Ethiopia aims to achieve carbon–neutral middle–income status before 2025 and build a climate–resilient green economy.

CITY



City	Berlin, Germany
Who	Berlin Senate Department for Urban Development and the Environment
What	<i>Climate–Neutral Berlin 2050</i>
When	March 2014
Key	LOW GHGs G

What are the barriers & How do we overcome them?

- Changing how millions of people live is a very special kind of problem
- The forces that shape our lives exist on many different levels.
- Tackling such a complex global challenge requires a new kind of approach
- Joining up research and practice across disciplines, borders, sectors and scales.



**ZERO
CARBON**
**MAKING IT
HAPPEN**

The logo consists of two main parts. The top part is a blue rectangular box containing the words "ZERO" and "CARBON" in white, bold, sans-serif capital letters, stacked vertically. The bottom part features the words "MAKING IT" and "HAPPEN" in a green, distressed, sans-serif font, also stacked vertically.

What are the barriers & How do we overcome them?

- Science
- Technology
- Economics
- Psychology
- Philosophy
- Sociology
- History
- Democracy
- Law
- Culture
- Spirit



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What we like in the COP21 text

- Peaking of global GHG ASAP
- The term "decarbonisation" is still in the text
- Recognition that peaking requires deeper cuts for developed countries
- Recognition of 1.5 as the real target
- Developed/developing solidarity as shown by the High Ambition Coalition includes 79 African, Caribbean and Pacific countries, the European Union and the U.S.
- The EU has agreed to pay \$519m to support climate action until 2020.
- India formed a Solar Alliance of 120 countries to ramp up renewables

What we don't like in the COP21 text

- Text describes the end point 1.5C / 2C guardrail, but no definition of delivery
- Unclear when the 5 year post Paris pathway to increase ambition will START
- Aviation and shipping need to be in there!!!
- Rich countries do not want possibility of liability & compensation obligations for the effects of climate change (US Congress would never accept it)
- No clear plan to deal with the fact the INDC's equal 2.7C so urgent plan for ambition – we have a destination but no clear map and no bicycle!!

What we want to see in the COP21 text

- Clear Zero Emissions Goal which meets the science
- Review period to increase ambition starts now!
- **Global practitioners / modellers network - detailed plans for all countries**
- **Making it happen - interdisciplinary initiative**
- Full cost accounting for all energy use
- Recognition of liabilities for continuing carbon
- Highlight co-benefits!

FULL REPORT:

www.track0.org/works/whos-getting-ready-for-zero-full-report