

PRESENTATION OF THE PAC PROJECT

Paris Agreement Compatible Scenarios For Energy Infrastructure

Jonathan BONADIO



EEB

European
Environmental
Bureau

TODAY'S AGENDA

- 10:00 Welcome and tour-de-table
- 10:30 Introducing the PAC project
- 10:45 Primary and final energy demand - Introduction to key assumptions
- 11:15 Coffee break
- Energy demand – Deeper dive into sectors**
- 11:30 Industry sector
- 12:00 Buildings (tertiary & residential) sector
- 12:30 Transport sector
- 13:00 Lunch break
- Building a narrative and numbers on energy demand**
- 14:00 Three sector-wise parallel working groups
- 14:30 Presentation of working groups results
- 15:30 Wrap-up, conclusion, next steps
- 16:00 End of the workshop

YOUR EXPECTATIONS

How does grid planning affects your daily work

- Quick introduction
- How does energy infrastructure matter in your daily work?
- What do you expect from this workshop?

Global warming must not exceed 1.5C, landmark UN report warns

Jonathan Watts
Global environment editor

In a stark new warning, the world's leading climate scientists have said that global warming must be kept to a maximum of 1.5C to lessen the risks of drought, floods, extreme heat and poverty for hundreds of millions of people.

The authors of the landmark report by the UN Intergovernmental Panel on Climate Change released today say urgent and unprecedented changes

are needed to reach this target, which is affordable and feasible although it lies at the most ambitious end of the Paris agreement's pledge to keep temperature rises between 1.5C and 2C.

The half-degree difference could

Inside
'If we act decisively, and innovate and invest wisely, we could avoid the worst impacts of climate change'

Nicholas Stern Page 13



also prevent corals from being completely eradicated and ease pressure on the Arctic, according to the 1.5C study, which was launched in Incheon, South Korea, after approval at a final plenary of all 195 countries that saw delegates hugging one another, with some in tears.

"It's a line in the sand and what it says to our species is that this is the moment and we must act now," said Debra Roberts, a co-chair of the working group on impacts. "This is the largest clarion bell from the science

community and I hope it mobilises people and dents the mood of complacency."

Huge obstacles remain. Policy makers commissioned the report at the Paris climate talks in 2016, but since then the gap between science and politics has widened. Donald Trump has promised to withdraw the US - the world's biggest source of historical emissions - from the accord.

The world is currently 1C warmer than pre-industrial levels. Following devastating



INDEPENDENT



Jodie Whittaker begins her first series of Doctor Who after more than half a century of males in the role

United Nations calls for unprecedented change to avoid climate catastrophe

JOSH GABBATISS
SCIENCE CORRESPONDENT

Coral reef extinction, Arctic ice disappearance and the destruction of entire island communities can only be

averted if the world sticks to its most ambitious global warming target. A landmark UN report, which is published today, has concluded that enormous and rapid changes to the way everyone on Earth eats, travels and produces

energy is needed to avert climate catastrophe. Drawing on more than 6,000 scientific studies and compiled over two years, the striking findings are now expected to set the agenda for the world's climate action for decades to come.

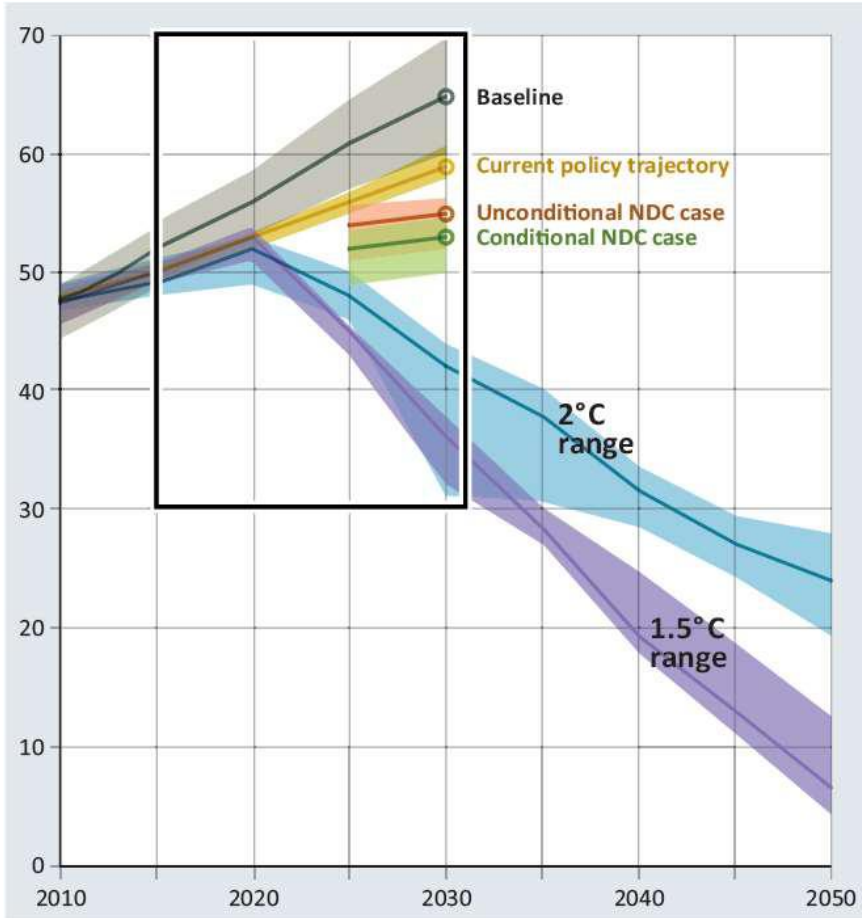


Energy industry

World has no capacity to absorb new fossil fuel plants, warns IEA



HALTING CLIMATE CHANGE MEANS DOING THINGS DIFFERENTLY



We cannot cheat the atmosphere:
science gives us the reference points

Current Paris pledges leave world on path > 3 degree Celsius (confirmed by SR 1.5)

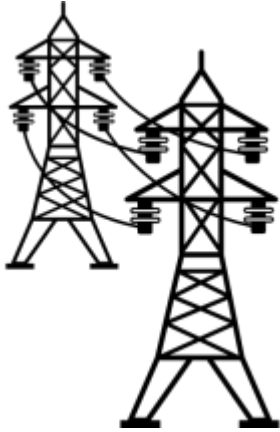
92% of EU citizens see climate change as a serious problem (2017 Eurobarometer)

→ We need a global increase of ambition with the EU in a leadership role

**The future is a world different
from the past**

ENERGY INFRASTRUCTURE : WHY DOES IT MATTER?

The future energy system is being built right now

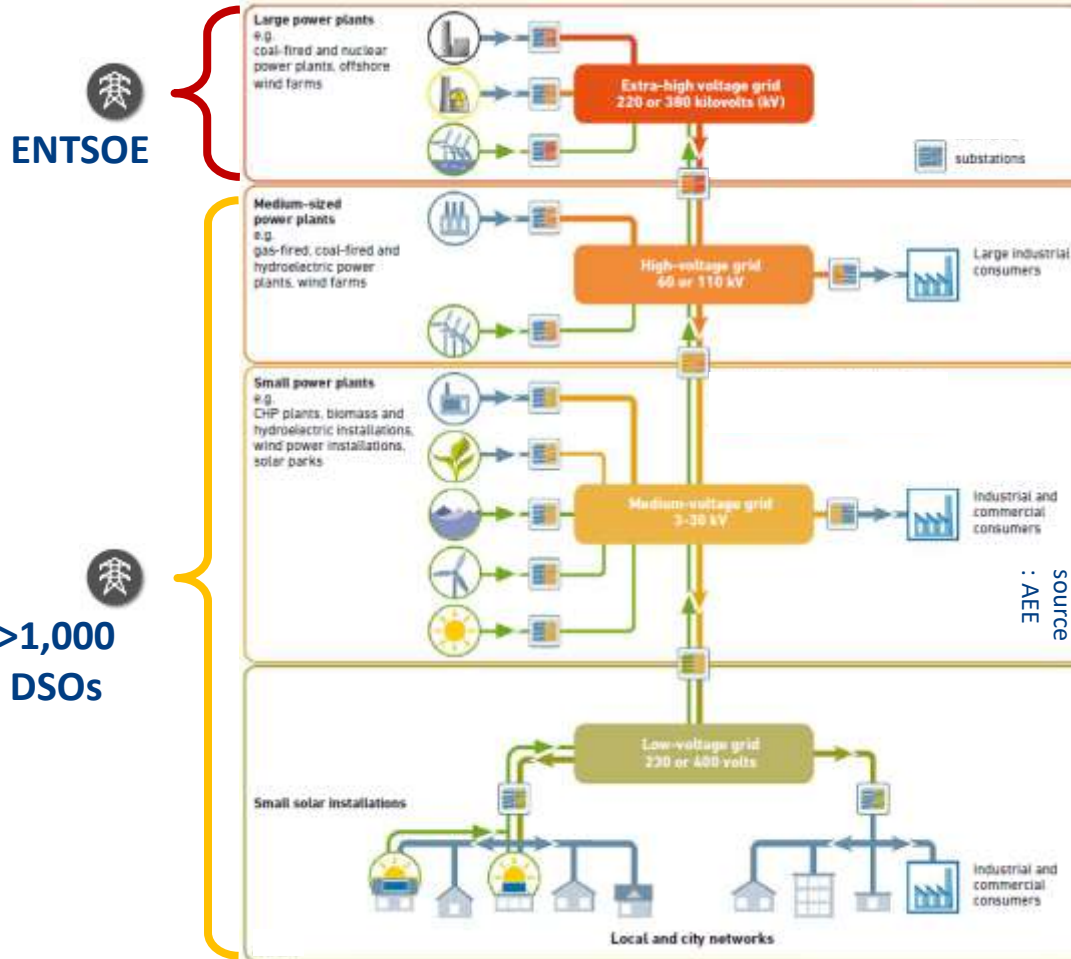


40 years



80 years

THE ELECTRICITY INFRASTRUCTURE IN ONE PICTURE



Increases of capacities
from 2020 to 2040
Summary



HOW THE EU PLANS ITS ENERGY INFRASTRUCTURE

Infrastructure should be:

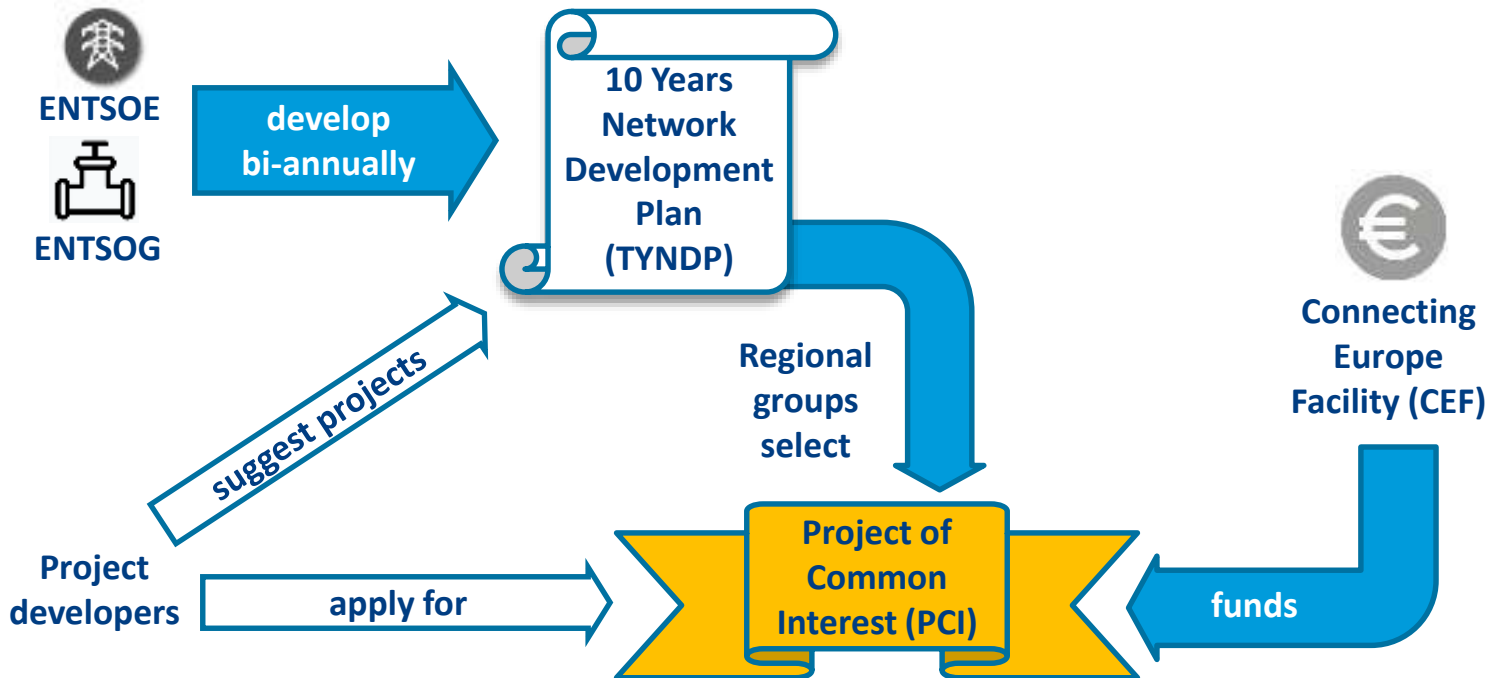
- Secure
- Competitive
- **Sustainable**

EU GRID PLANNING

Paris Agreement 2015

Clean Energy Package 2018

Trans-European Networks for Energy (TEN-E) Regulation 2013



THE PAC PROJECT

Presentation

Paris Agreement Compatible Scenarios for Energy Infrastructure

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The partners



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The process

- **Start : early 2019**
- **Duration : until end 2020**
- **To be part of a **long-term** vision**
- **5 scenarios workshops**
- **4 modellers' workshop**
- **Deliverables : scenarios + ...**

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What do we expect from you ?

- **Provide your feedback on key assumptions and parameters regarding energy demand**
- **Help us reflect your vision**
- **Elaborate on figures on the future energy need**
- **Help us improve our current approach**
- **Challenge us !**



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THANK YOU!

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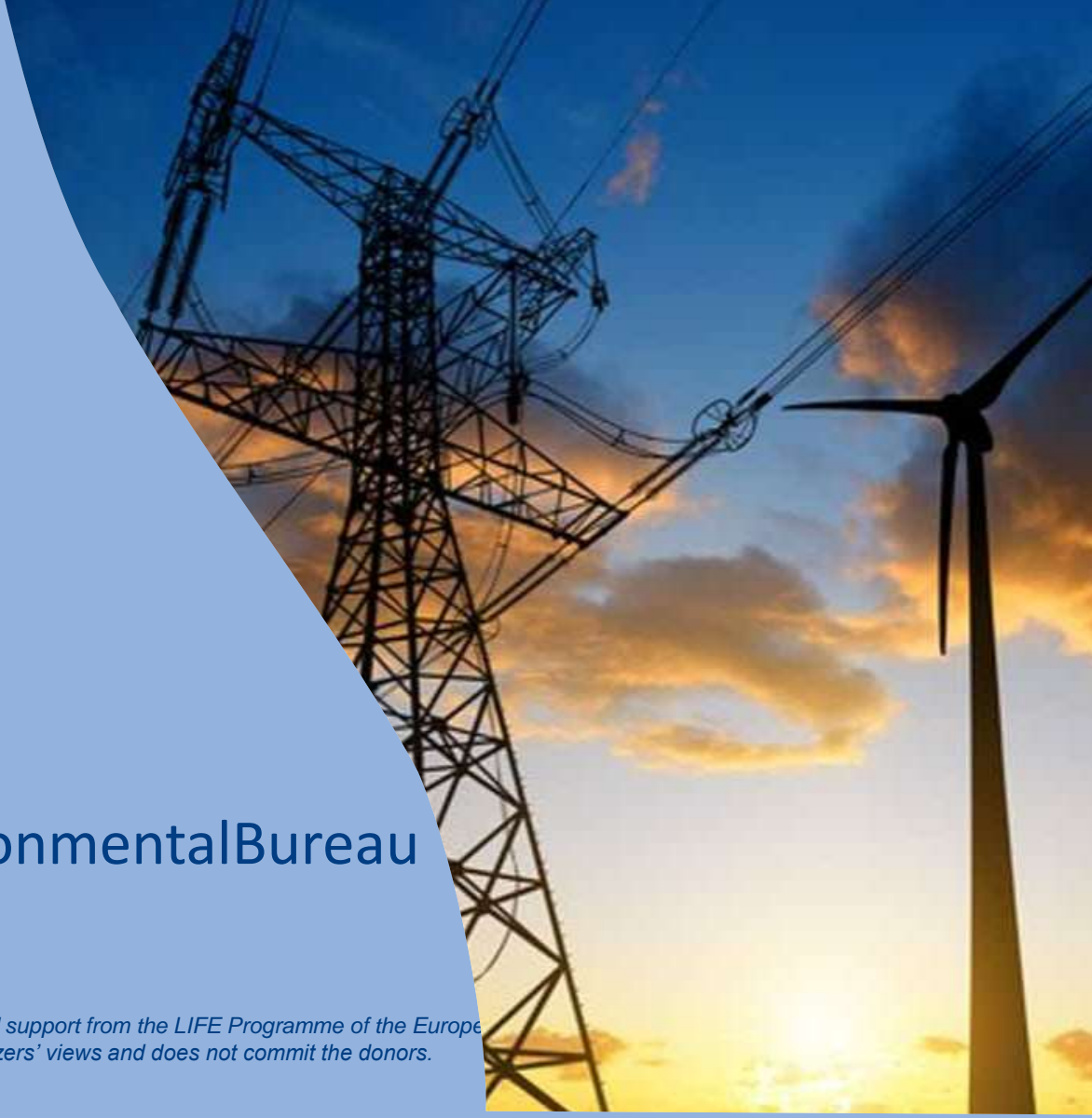
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KEY QUESTIONS FOR EACH WORKING GROUP

3 answers for each question (by order of importance)

1. **Assumptions**: What are the most relevant assumptions to be considered in your sector?
2. **Red lines**: What would be the assumptions that appear less plausible to you?
3. **Game changers**: What could be the most important game changers in your sector?
4. **Figures**: Can you give us quantitative assumptions on... (sector-specific question)?

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Next steps

- **3 scenarios workshops**
- **Next one on energy demand (October)**
- **3 modellers' workshop**
- **ENTSO consultation : autumn**