



EUROPEAN TECHNOLOGY & INNOVATION  
PLATFORM ON WIND ENERGY

# Advisory Group meeting

# Agenda

TIME	AGENDA ITEM
14:30 – 14:40	Welcome Antonio De La Torre, Chief Technology Officer (SGRE)
14:40 – 15:00	ETIPWind 2019 Work Programme Aidan Cronin, Chair of the ETIPWind Executive Committee
15:00 – 15:50	Technology Roadmap <ul style="list-style-type: none"> <li>• Presentation by the secretariat on drafting process and objectives;</li> <li>• Advisory Group feedback.</li> </ul>
15:50 – 16:00	Break
16:00 – 16:30	A 100% renewables-based energy system <ul style="list-style-type: none"> <li>• Presentation by Jochen Kreusel, Market Innovation Manager (ABB); and</li> <li>• Roundtable discussion on possible common initiatives to increase the share of wind power in the energy system.</li> </ul>
16:30 – 17:30	Increasing the impact of the European Wind Energy Sector <ul style="list-style-type: none"> <li>• Presentation by Antonio De La Torre, Chief Technology Officer (SGRE); and</li> <li>• Roundtable discussion on areas suited to cross-sector collaboration.</li> </ul>
17:30 – 17:45	WindEurope: 2019 strategic objectives and policy milestones Pierre Tardieu, Chief Policy Officer (WindEurope)
17:45 – 18:00	Conclusions and next steps Aidan Cronin, Chair of the ETIPWind Executive Committee
18:00	End of meeting
18:00 – 18:30	Transfer to WindEurope Members' Reception



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# ETIPWind

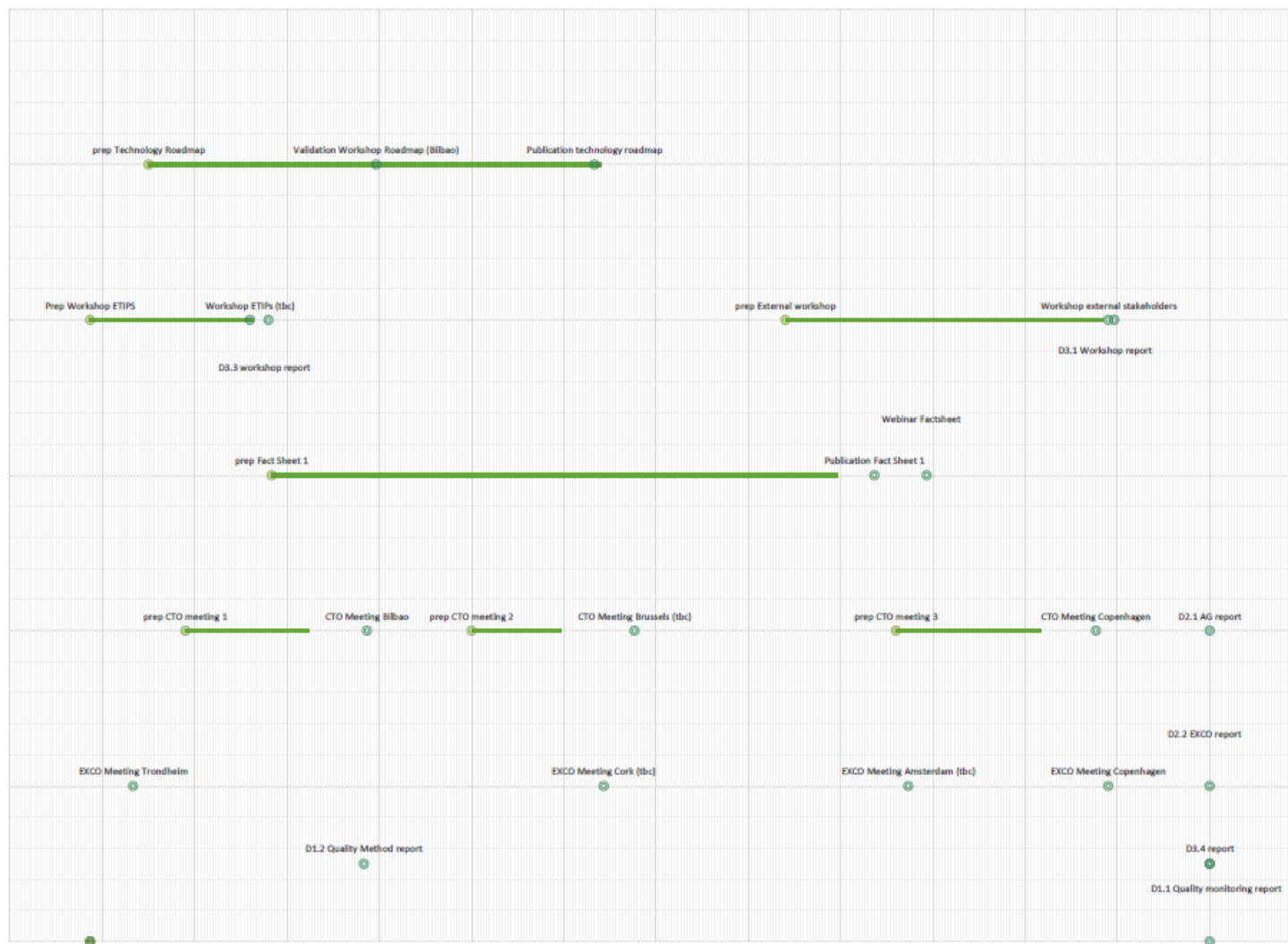
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## 2019 Work programme

Aidan Cronin  
*Executive Committee chair*

[etipwind.eu](http://etipwind.eu)

# 2019 Work Programme (1)



## 2019 Work Programme (2)

- 15/01 – Technology Roadmap kick-off (Trondheim).
- 21/02 – Power-2-X workshop (Brussels).
- 01/04 – Advisory Group meeting (Bilbao).
- 04/04 – Technology Roadmap workshop (Bilbao).
- 30/06 – Technology Roadmap publication.
- 05/09 – Advisory Group Meeting (Brussels - tbc).
- 15/09 – Factsheet 1 publication & webinar.
- 25/11 – Advisory Group meeting (Copenhagen - tbc).
- XX/11 – Workshop (Copenhagen).

# Engaging the wider energy R&I community

IRENA launches report on integration of variable renewables



Monday, 18 March 2019

EU Energy players discuss energy sector synergies and how to leverage new clean energy technologies in an integrated system

*The European Technology and Innovation Platform for Smart Networks in Energy Transition held a high-level workshop on how to leverage the latest clean energy technologies and energy system initiatives to achieve energy systems synergies and decarbonisation in line with the ETIP SNET Vision 2050.*

**Brussels, 14 March 2019.** The ETIP SNET workshop "Leveraging the Clean Energy Technologies Potential through Integration into an Efficient System" brought together experts and stakeholders of the different energy systems across Europe to discuss the achievements and challenges of the integration of the electricity networks with other energy carriers (gas, heating, cooling, water, transport etc.) and how to enhance the synergies between them in view of an overall optimisation and an acceleration of the decarbonisation process.



Energy Transition Week 2019: 25-29 March

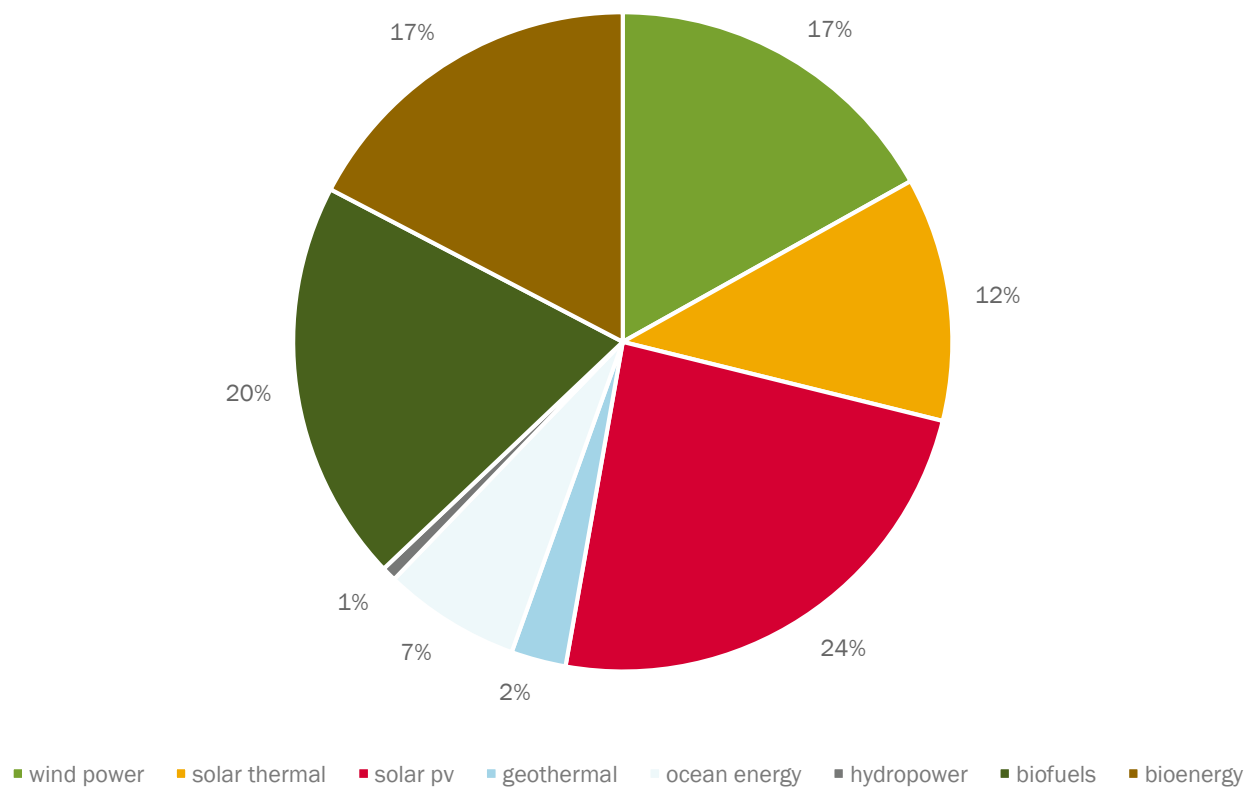
26 March: Energy Transition Conference



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# EU spending on renewable energy R&I\*

EU funding on RES in framework programmes from 1998 - 2016



\*Analysis of EU spending in Framework Programmes (FP5 – H2020) performed by Trinomics on behalf of the European Commission.

# EU spending on renewable energy R&I\*

	wind power	solar thermal	solar pv	geothermal	ocean energy	hydropower	biofuels	bioenergy
EU funding in million €	565	400	800	90	225	24	660	580
% electricity consumption (2016)	9.6	0.17	3.6	0.21	0	10	0	5.4
% heat consumption (2016)	0	0.4	0	0.15	0	0	0	17
turnover in billion € (2016)	40	3.4	11	1	0	8	13	40
average exports in billion € (2011 – 2016)	9	2	5	0.25	0	0.56	5.5	6
Number of EU jobs (2016)	300,000	29,000	100,000	8,600	0	107,000	205,100	450,000

\*Analysis of EU spending in Framework Programmes (FP5 – H2020) performed by Trinomics on behalf of the European Commission.





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# Update on Horizon Europe — R&I funding 2021-2027

# Horizon Europe – a provisional deal

New

- **General features**

- 35% earmarking for climate action.
- 1 climate, energy & mobility cluster.
- More emphasis on “widening” and bridging the R&I divide.
- Exact budget to be defined later on (at the end of the year).

- **Fast track to research & innovation instrument**

- Bottom-up application process.
- 6 months to grant.
- 6 partners maximum.
- Maximum EU contribution of 2.5 million.

New

- **Strategic planning**

- Basis for the work programmes.
- Looking up to 4 years ahead.
- Mandatory multi-stakeholder consultation process.
- To be approved by Member State representatives.

- **Missions**

- Adapting to climate change.
- Cancer.
- Healthy oceans, seas, coastal and inland waters.
- Climate-neutral and smart cities.
- Soil health and food.

# Horizon Europe – rationalising partnerships

## Horizon 2020

- 17 public – private partnerships
  - 7 Joint Technology Initiatives and Joint Undertakings.
  - 10 Contractual Public-Private Partnerships (cPPPs).
- 50 or more public – public partnerships
  - ERA-NETs, Joint Programming Initiatives, EUREKA...

## Horizon Europe

- 8 strategic *areas* suited for partnerships
  - Health.
  - Key digital & enabling technologies.
  - Metrology.
  - Air traffic, aviation and rail.
  - Bio-based industries.
  - Hydrogen & energy storage.
  - Mobility.
  - SMEs.

Name of partnership	Type	Total budget	EU Budget	Private Budget	Sector
Innovative Medicine Initiative (IMI2)	JU	3,276	1,638	1,638	Health
Fuel Cell & Hydrogen (FCH2)	JU	1,300	665	665	Hydrogen
Clear Sky (CS2)	JU	4,000	1,800	2,200	Aviation
Bio Based Industries (BBI)	JU	3,700	975	2,730	Bio industry
Electronic components & systems for European leadership (ECSEL)	JU	5,000	1,180	2,340	Electronics
Shift-2-Rail (S2R)	JU	920	450	470	Rail
Sesar2020	JU	1,500	500	1,000	Air traffic
Factories of the Future (FoF)	cPPP		1,150		Manufacturing
Energy Efficient Buildings (EEB)	cPPP		600		Buildings
European green vehicle initiative (EGVI)	cPPP	1,500	750	750	Automotive
Sustainable Process Industry through Resource and Energy Efficiency (SPIRE)	cPPP		900		Process industry
Photonics21	cPPP	3,500	700	2,800	Photonics
EuRobotics	cPPP	2,700	700	2,000	Robotics
High Performance Computing (HPC)	cPPP	1,400	700	700	ICT
Cybersecurity (ECSO)	cPPP	1,800	450	1,350	ICT
Big Data Value (BDV)	cPPP	2,500	500	2,00	ICT

# Horizon Europe – next steps

## European Parliament

- ITRE committee vote this week (01-02 April).
- Plenary vote in week of 15-19 April.



## Council of the EU

- COREPER (permanent representatives) vote 29 March or 03 April.
- (Council meets in May).



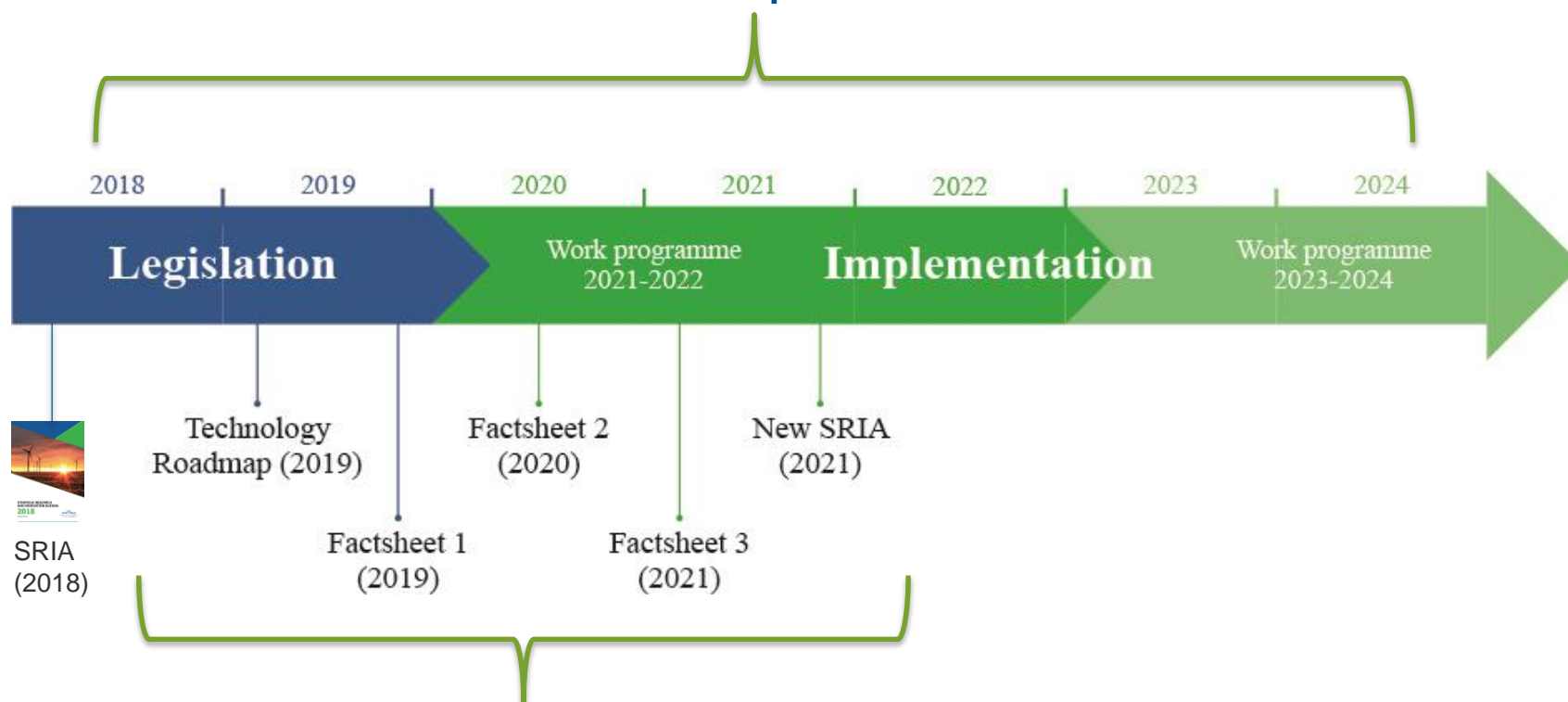


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# Technology roadmap

# Technology Roadmap & Horizon Europe

## Horizon Europe timeline



## ETIPWind II publications

# Technology Roadmap – Timeline (indicative)





# Technology Roadmap

- 6 pillars

- Grid & system integration;
- Operations & maintenance;
- Next generation technologies;
- Offshore balance of plant,
- Floating wind;
- Human resources.

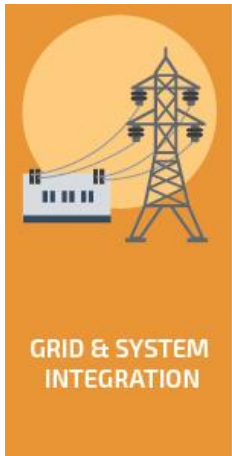
- 11 challenges

- E.g Cost competitiveness of the European industry; and
- E.g. Attract and ret(r)ain talent in Europe.





- 65+ research topics

- Criticality to the sector; and
- Urgency of action.

# Task Force leaders



# Research priority ID-kit (template)

Insert name of the Topic			Insert “urgency”	Insert “criticality”
<b>DESCRIPTION OF THE PRIORITY (200 words)</b>  <b>Part A: generic description (100 words max)</b> im et velit aeterno. His ea molestie incorrupte. Sumo docendi hendrerit ut vel. Cum in brute impedit, vel elitr laudem occurreret an, at ridens laoreet duo. Placerat disputando ad vim, simul disputationi nec ea. Et mollis appellantur quo.  <b>Part B: specific research actions (100 words max)</b> <ul style="list-style-type: none"> <li>• ad veniam atomorum voluptatibus pro,</li> <li>• sea ne quaestio adipiscing.</li> <li>• Prima qualisque necessitatibus ne est,</li> <li>• vix ut quis debitis ullamcorper, augue simul id vim.</li> <li>• Ut duo mazim mnesarchum</li> </ul>			<b>MILESTONES</b> <ul style="list-style-type: none"> <li>• Vel splendide moderatius eu.</li> <li>• Pro eros vidisse deserunt ad,</li> <li>• te cum modo mollis</li> </ul>	
<b>COST REDUCTION</b> 	<b>GRID INTEGRATION</b> 	<b>EU LEADERSHIP</b> 	<b>FUNDING</b> 	<b>WHO LEADS</b> 

# Impact criteria – to be defined

- Retaining EU technology leadership in the global market.
  - *How will developing this technology strengthen the EU wind energy sector?*
  - *What is the market potential and what is the state-of-art?*
- Towards wind energy being competitive in a merchant price world.
  - *How will this technology drive costs down and how much?*
- Providing 30% of power demand by 2030.
  - *How will this technology help the final use of wind power?*



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# A 100% renewables-based energy system

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# Increasing the impact of the European wind energy sector

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# WindEurope: 2019 strategic objectives and policy milestones

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# EU Presidencies





29 March/12 April



# Commission comments on draft National Energy & Climate Plans



# European elections: 23-26 May

## PROJECTED COMPOSITION OF THE NEXT EU PARLIAMENT

Last updated 28 Jan 2019. Click on one or more parties to build a coalition.

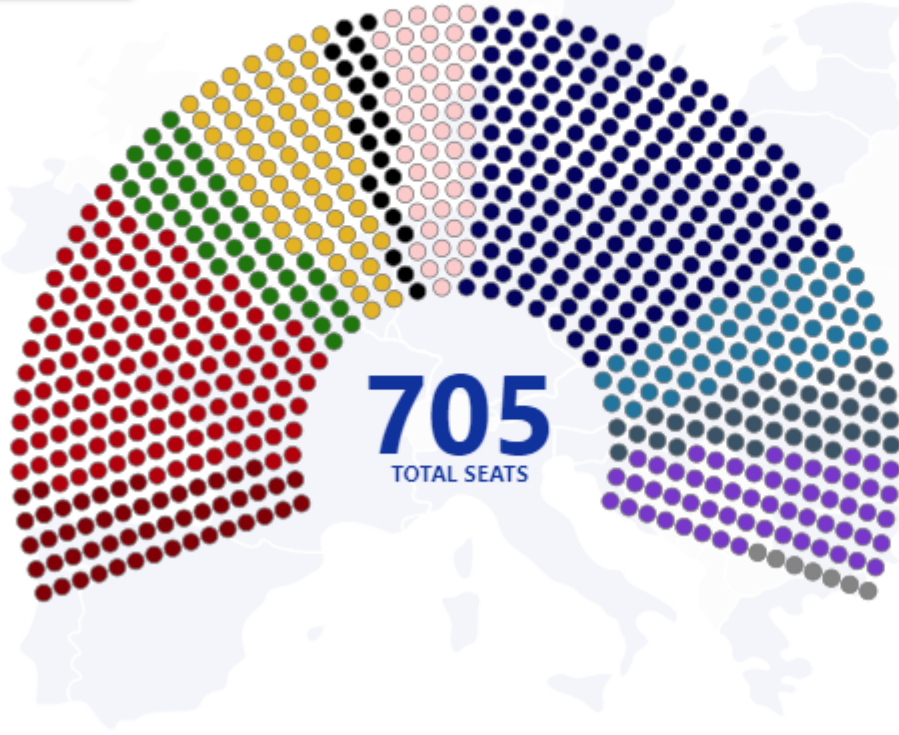
VIEW MEP SEATS BY REGION:

VIEW MEP SEATS BY COUNTRY:



All

All

RESET ALL



Number of seats by group and change compared to present

 <b>European People's Party (EPP)</b>	↓	<b>183</b> 36
 <b>Progressive Alliance of Socialists and Democrats (S&amp;D)</b>	↓	<b>134</b> 54
 <b>Alliance of Liberals and Democrats for Europe (ALDE)</b>	↓	<b>66</b> 2
 <b>Europe of Nations and Freedom (ENF)</b>	↑	<b>58</b> 23
 <b>European Conservatives and Reformists (ECR)</b>	↓	<b>53</b> 20
 <b>European United Left/Nordic Green Left (GUE/NGL)</b>	↑	<b>52</b> 1
 <b>New parties</b>	↑	<b>45</b> 45
 <b>The Greens/ European Free Alliance (Greens-EFA)</b>	↓	<b>44</b> 8
 <b>Europe of Freedom and Direct Democracy (EFDD)</b>	↓	<b>41</b> 1
 <b>La République en marche</b>	↑	<b>22</b> 22
 <b>Non-attached Members</b>	↓	<b>7</b> 16

# 20-21 June European Council

EPP

**Manfred Weber**

Social Democrats

**Frans Timmermans**





The background of the image is the European Union flag, featuring a blue field with twelve yellow five-pointed stars arranged in a circle. The flag is shown with a slight wave, giving it a three-dimensional appearance.

# **Manifesto for the future of Europe: A Shared Destiny**

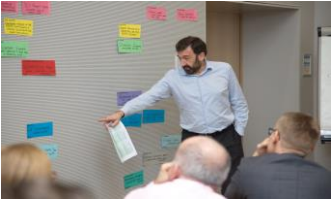
# Hearings of European Commission nominees



31 December



# Big WindEurope events



WG Chairs' meeting: 30  
Jan

CEO retreat: 28  
Feb/1 March



New Chair: 6 March



Bilbao 2019: 2-4  
April



Open day: 25  
June



Copenhagen 2019: 26-28  
Nov





# 1. Electrification, decarbonisation, increasing demand for wind energy

## Main challenges and opportunities

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- Shaping the **National Energy and Climate Plans** EU Member States are now preparing to ensure they push electrification
- The need to drive the narrative on the **renewables-based electrification of transport, buildings and industrial processes**
- The need to **operationalise** the **renewables-based electrification agenda**

## 2. End-of-life, repowering and recycling etc.

### Main challenges and opportunities

- The prospect that **22 GW** of existing wind farms in Europe will be **more than 20 years old by 2022** and the need to preserve existing sites
- The need to facilitate **lifetime extension**
- The prospect that **10 GW** of old turbines will be **dismantled between 2018 and 2022 without lifetime extension** and the need to maximise the rate of repowering
- The need to scale up the **recycling of decommissioned blades** and other equipment including by working with the waste disposal and other sectors
- The need to get our supply chain producing more **recyclable components**

### 3. Revenue - auction design, new business models (e.g. corporate renewable PPAs)

#### Main challenges and opportunities

- The importance of **long term revenue stability** to securing investments and minimising capital costs and the crucial role of good auction design
- The need to ensure a **robust carbon price** to incentivise investments in renewables
- The crucial role of the EU State Aid Guidelines and DG COMP in shaping **national auctions** and other Renewable Energy policies
- The need to promote the development of **Corporate renewable PPAs** and green sourcing strategies

## 4. Competitiveness (cost reduction, trade, R&D) (1/2)

### Main challenges and opportunities

- The need to **secure significant volumes** for the further build-out of wind to 2030
- The increasing **scrutiny**, as a result of auctions, from National Governments and stakeholders **on wind energy costs**
- The impact of **international competition** and the need to uphold **fair trade**, and maximise support for EU wind exports from financial institutions
- The need to ensure the supply chain is able to support significant expansion of wind and **sources materials and components sustainably**
- The need to engage financial institutions to develop and deploy the most **effective financial instruments** for spreading and mitigating risk

## 4. Competitiveness (cost reduction, trade, R&D) (2/2)

### Main challenges and opportunities

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- The need to **maximise EU public R&D expenditure on wind energy** and ensure it is spent in the right way
- The need to ensure **priorities for publicly funded wind R&D** across Europe effectively address the evolving needs of the sector
- The need to ensure the European wind industry secures **maximum possible value** from whatever **R&D budget** is available to it
- The need to ensure **academic work** on wind across Europe reflects as close as possible the operational needs of the industry

## 5. System integration and digitalization (1/2)

### Main challenges and opportunities

- The need to ensure **maximum possible flexibility in electricity demand** and for the energy system to accommodate large volumes of wind energy
- The need to **ensure the electricity system and markets are fit for variable renewables** to accommodate very high penetration rates of wind energy
- The reality that **grid infrastructure is not expanding as fast as needed**, offshore and onshore
- The need to accelerate the **decommissioning of inefficient, polluting power plants**

## 5. System integration and digitalization (2/2)

### Main challenges and opportunities

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- The need to deploy a consistent message on **system integration costs**
- The need to ensure the wind industry fully leverages **digitalization** including to support enhanced system integration of variable renewables
- The need to address **cybersecurity** challenges to the integrity of wind assets and the grid
- The need for **countries to work together** regionally - on grids, regulations, auction timing, standards - in support of further expansion of wind
- The possibility of a **No-deal Brexit**

## 6. Co-existence and public engagement

### Main challenges and opportunities

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- The need to **minimise permitting restrictions** on the further expansion of wind
- The need to ensure **effective community engagement** and maximise support from communities and more broadly from society for wind energy projects
- The need to ensure maximum possible **support from military, civil aviation authorities, fishing and shipping industries** for further expansion of wind
- The need to ensure **planning** from National Governments factor in the large scale deployment of wind energy



# National Plans





# Permitting





# Communications





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# Conclusions & Next steps

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# End of meeting

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