

Connection Network Codes

# IGD CONSULTATION

Outcomes – high level overview

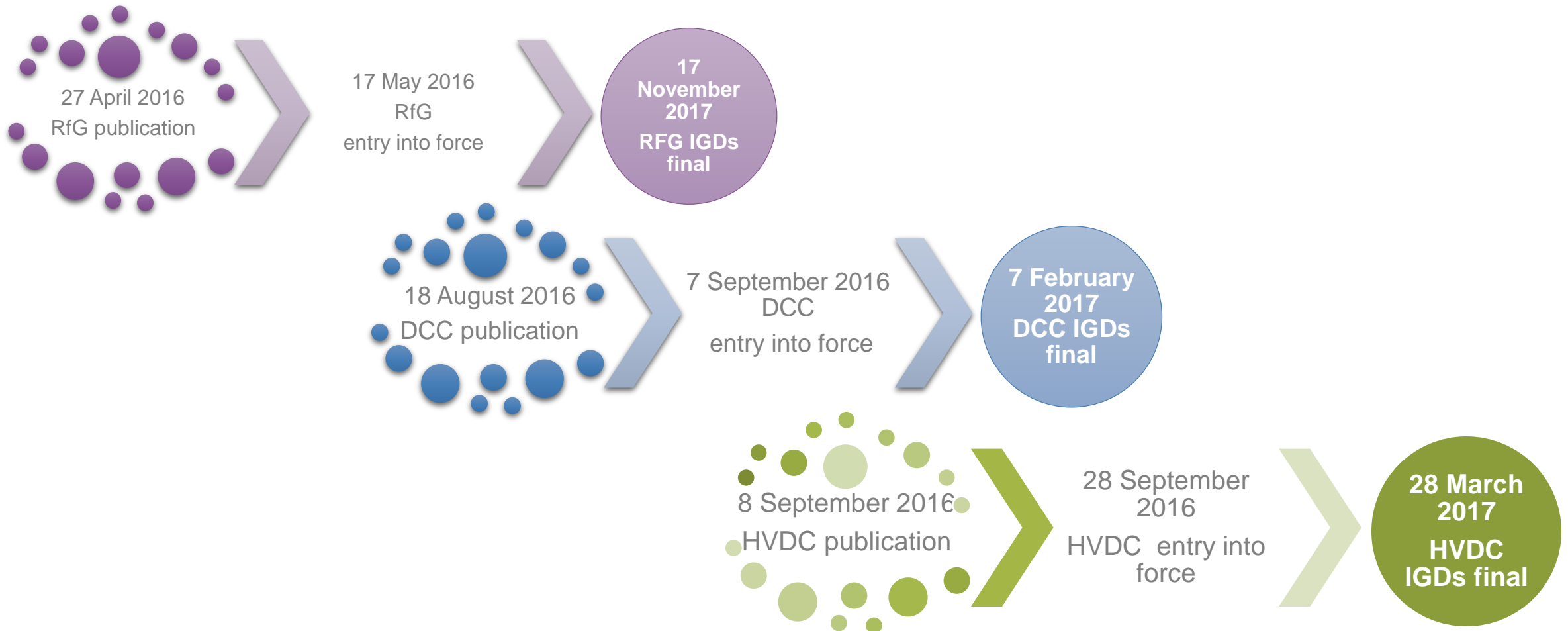
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**2<sup>nd</sup> Public Workshop on IGDs**

13 September 2016



# All the Connection Network codes are final



# Why did we consult the IGDs

1. The IGDs are legally requested to be consulted with stakeholders before their release within the six month of the entry into force of the Regulations.
2. The IGDs are drafted as supporting material for the connection codes implementation at the member state level and shall aim to give guidance for national specifications for non-exhaustive requirements.
3. Although the main addressees of the IGDs are the system operators, the connection codes have a significant impact on manufacturers, power generating module operators, demand facilities and distribution networks.

# 18 IGDs covering all the Connection network codes

1. Compliance monitoring
2. Cost-benefit analysis
3. Fault current contribution from PPMs & HVDC converters
4. Harmonisation
5. Instrumentation, simulation models and protection
6. Making non-mandatory requirements at European level mandatory in a country
7. Need for synthetic inertia for frequency regulation
8. Parameters of non-exhaustive requirements
9. Parameters related to frequency stability
10. Post fault active power recovery
11. Reactive power control mode
12. Reactive power management at transmission/distribution interface
13. Reactive power requirement for PPMs & HVDC converters at low / zero active power
14. Real time data and communication
15. Rate-of-change-of-frequency withstand capability (RoCoF)
16. Selection of national parameters for RfG type classification
17. Special issues for Type A generators
18. Voltage related parameters for non-exhaustive requirements



# Comments on the RfG elements of the IGDs

Consultation:  
1 July -15 August 2016

Do you consider this IGD helpful to reasonably support the national implementation process?

*Please select only one item*

☐ Yes ☐ No

Does the content of the IGD cover the technical issues of this topic appropriately?

*Please select only one item*

☐ Yes ☐ No

Comments on the technical information within this IGD

General (other) comments

# IGD public consultation

Received 16 answers from: TUC, EUGINE – European Engine Power Plants Association, P2 Analysis, Energy Networks Association (ENA), Senvion GmbH, EUTurbines, Orgalime, EURELECTRIC, VDMA (Verband Deutscher Maschinen- und Anlagenbau, Mechanical Engineering Industry Association), EDF SA, VGB PowerTech e.V., VAZ e.V. - The German national Association of Accredited Certification Bodies, CEDEC, EDSO, Geode, RES, COGEN Europe, WindEurope,

## General remarks:

- earlier and more intense stakeholder involvement in national implementation processes
- need of similar structure/level of content for all the IGDs;
- more technical details and values for parameters of non-exhaustive requirements required
- to promote harmonization of non-exhaustive requirements at European level

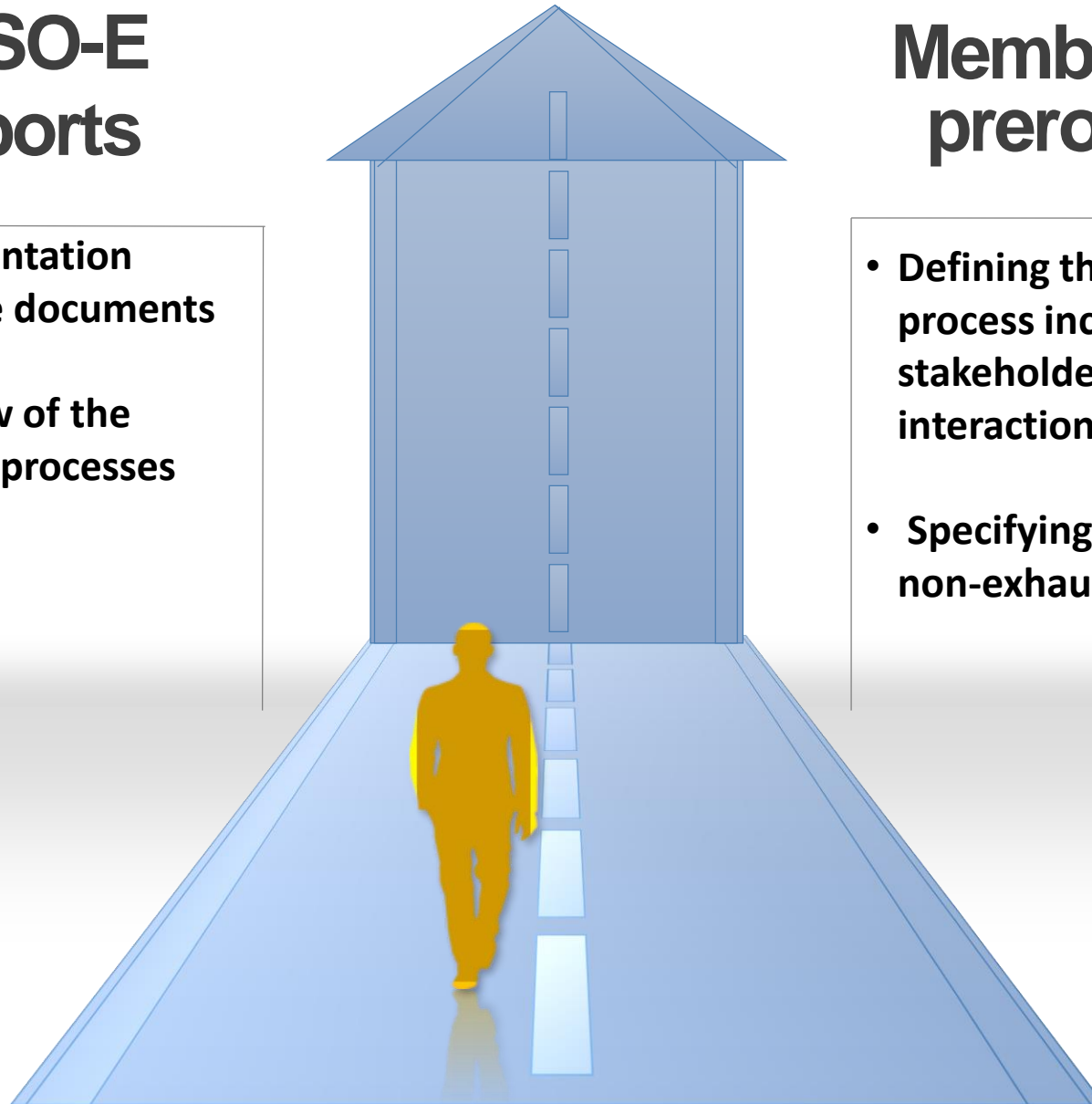
Many stakeholders consider IGDs to prescribe national implementation processes and to deliver solutions for non-exhaustive requirements.

# ENTSO-E supports

- Implementation guidance documents
- Overview of the national processes

# Member states prerogatives

- Defining the implementation process including the stakeholders information and interactions
- Specifying the parameters of non-exhaustive requirements



# Objectives of implementation guidance

## Implementation guidance shall

- ... inform and facilitate the national processes
- ... explain the technical issues, conditions and interdependencies which need to be considered when complying with the requirements of the Regulations

## Implementation guidance are not to

- ... define the parameters of non-exhaustive requirements.
- ... prejudge the national decisions nor lifting national decisions to a European level
- ... ensure harmonized rules throughout the EU



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