

Guarantee of Origin

Germany vs. France

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GO2MARKETS is an independent trading house specialized in environmental commodities worldwide.

- Active since April 2013
- Yearly trading volume for GO's: 30TWh
- European and worldwide network of producers and consumers for climate friendly projects
- Youngest member of the World Energy Council.

Our markets:

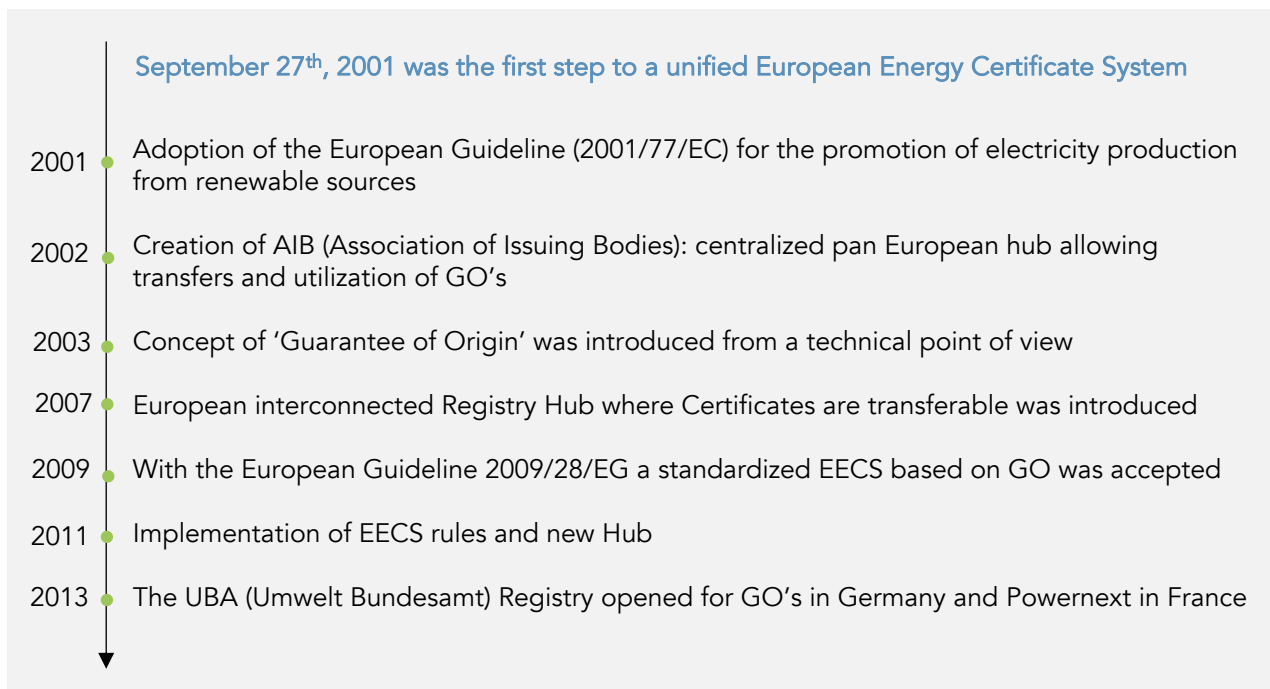
- Renewable Energy Guarantees of Origin (GO's) in Europe
- Renewable Energy Certificates (RECs) in the rest of the World
- Biogas-/Biomethane Certificates
- Energy Efficiency Certificates
- Carbon Offsetting

1. Definition GO

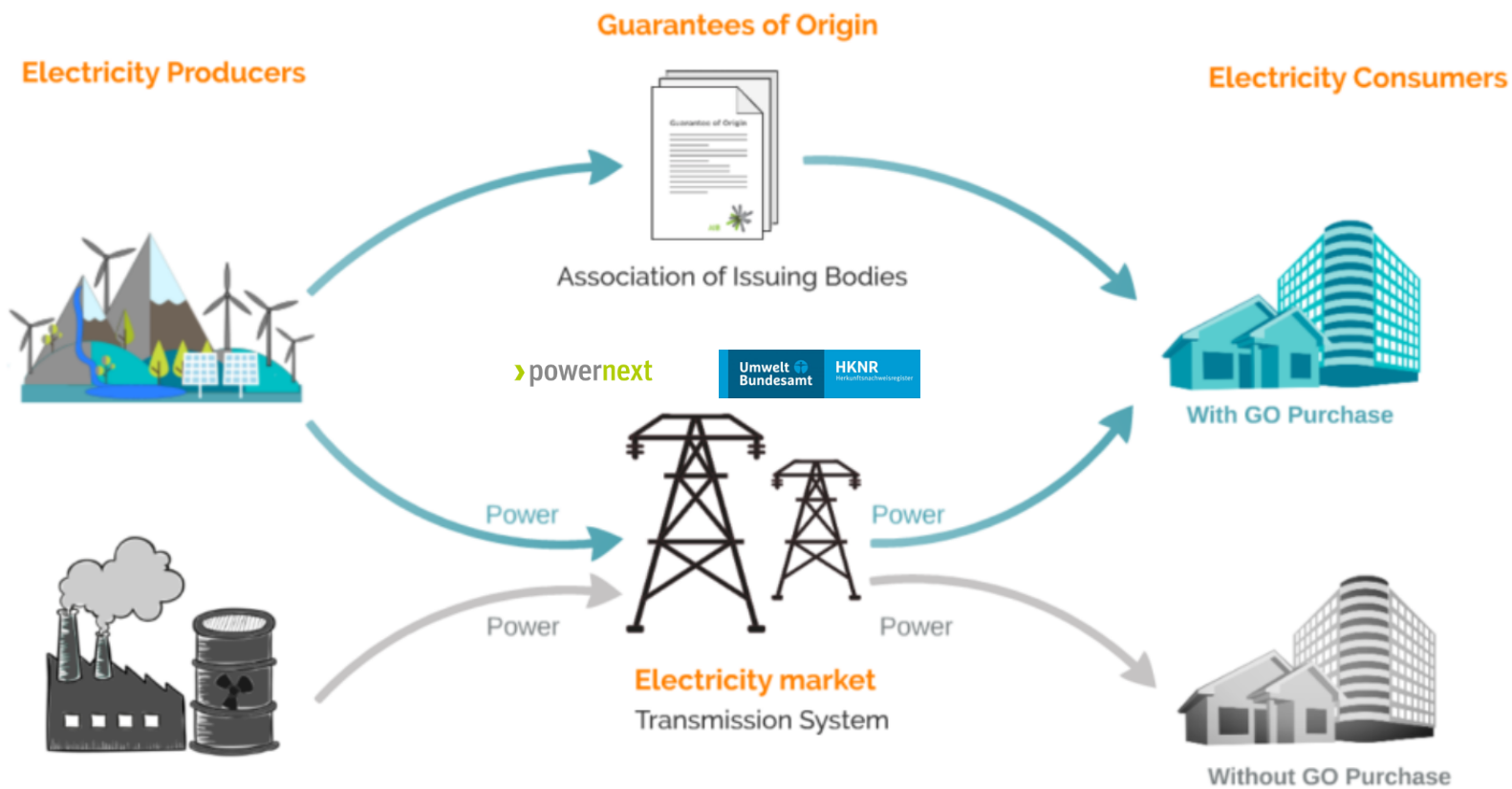
A Guarantees of Origin is an electronically transferable document and works like a Birth Certificate. It informs about where and how a MWh of renewable electricity was produced. Its purpose is to ensure that the renewable quality is sold or marketed only once. Today it is the only tool of tracking the origin of electricity in Europe, many countries around the World are currently setting up similar systems to track and promote renewable energy production.



2. History of the system



3. How does it work?



4. What are the motivation and benefits of the participants?



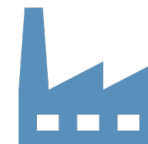
Private consumer

- ✓ Sustainable mindset
- ✓ Environmental concerns



Corporate Clients

- ✓ Sustainable mindset
- ✓ Environmental concerns
- ✓ Additional subventions / tax exemptions
- ✓ Market pressure
(Environmental concerns from costumers)
- ✓ Board decision (RE100) GHG Protocol on Balance Sheet

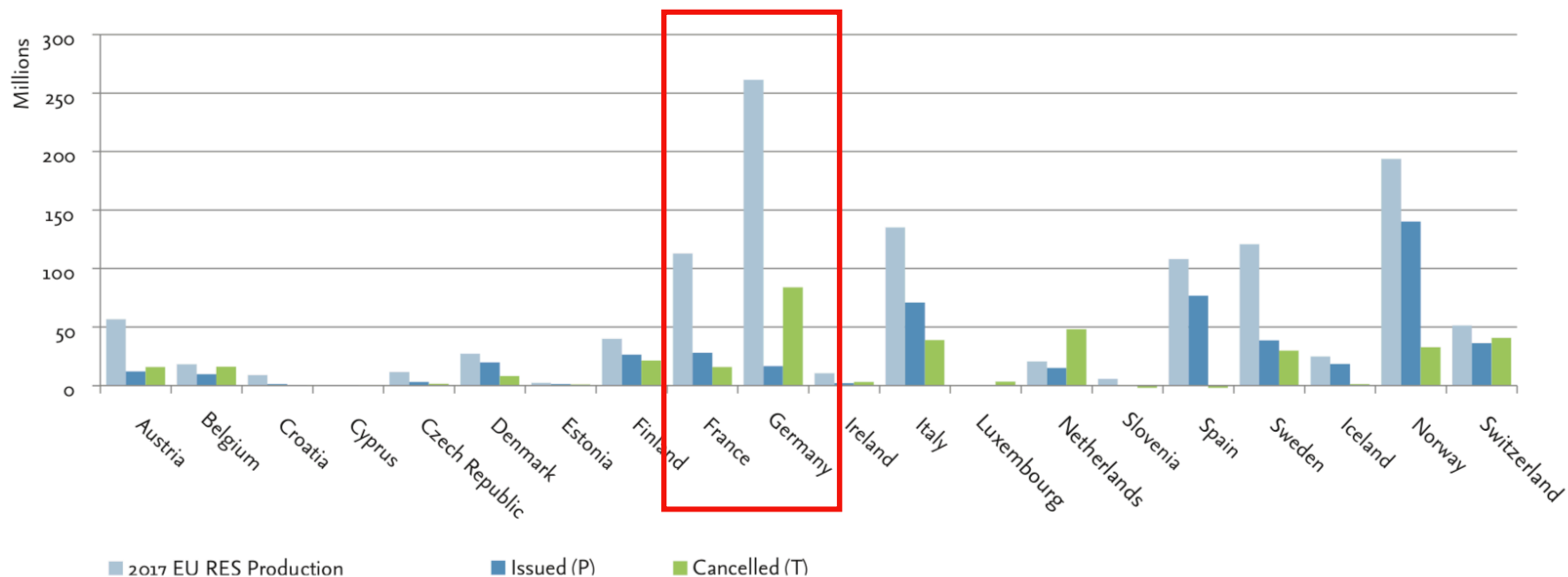


Energy suppliers

- ✓ Sustainable mindset
- ✓ Environmental concerns
- ✓ Renewable energy products
- ✓ Strategic market placement
- ✓ State obligations
- ✓ Fuel mix disclosure

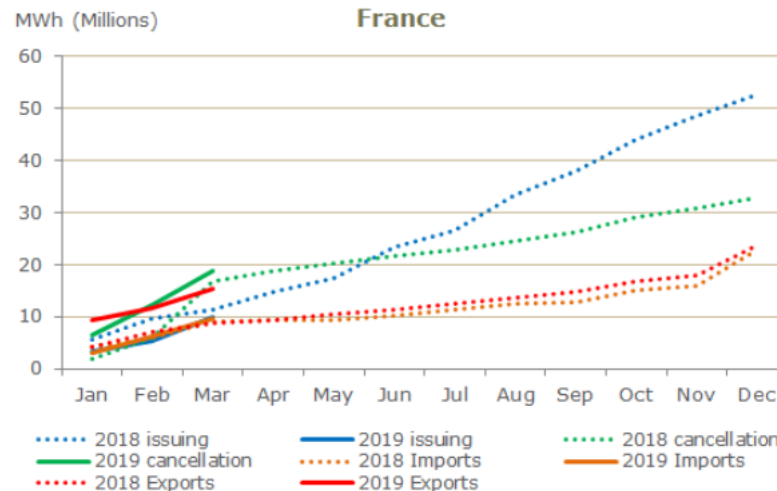
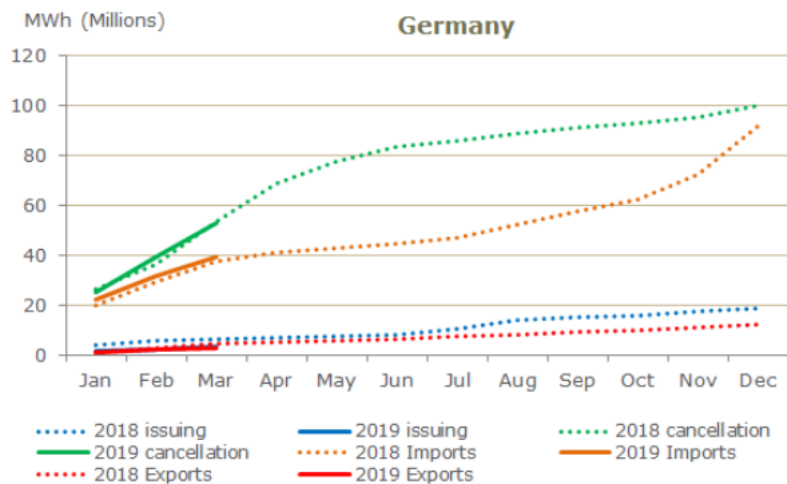
5. Market overview in Europe

EECS market penetration (Millions)



Source: <https://www.aib-net.org>

6. Markets: Germany vs. France



Source: <https://www.aib-net.org>

- ✓ France is producing more than Germany (50 TWh vs. 16 TWh)
- ✓ Germany is consuming more than France (106 TWh vs. 35 TWh)
- ✓ Germany is a net importing country whereas France is balanced

6. Markets: Germany vs. France: Production and technology per country in MWh (2018)

TECHNOLOGY	GERMANY	FRANCE
BIOMASS	1,872,756	632,978
SOLAR	6,314	314
WIND	18,910	169,225
HYDRO	12,025,767	48,377,626
UNSPECIFIED & OTHER	2,312,340	603,429
TOTAL	12,236,087	49,783,572

Source: <https://www.aib-net.org>

- ✓ France is producing more hydro power than Germany
- ✓ Germany is consuming its subsidized power production that doesn't get GO's: no cumulation of EEG and GO's
- ✓ France is changing its system and auctioning the GO's in September 2019

6. Markets: Germany vs. France (2017)

	GERMANY	FRANCE
Nb of registered scheme participants	1,633	56
Registered production devices	753	354
- Wind	341	4
- Hydro	250	333
- Thermal	40	17
- Solar	49	-
Total capacity installed (MW)	13,446	19,791
- Wind	1,016	32
- Hydro	4,946	19,618
- Thermal	47	141
- Solar	27	-

Source: <https://www.aib-net.org>

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Thank you.

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