

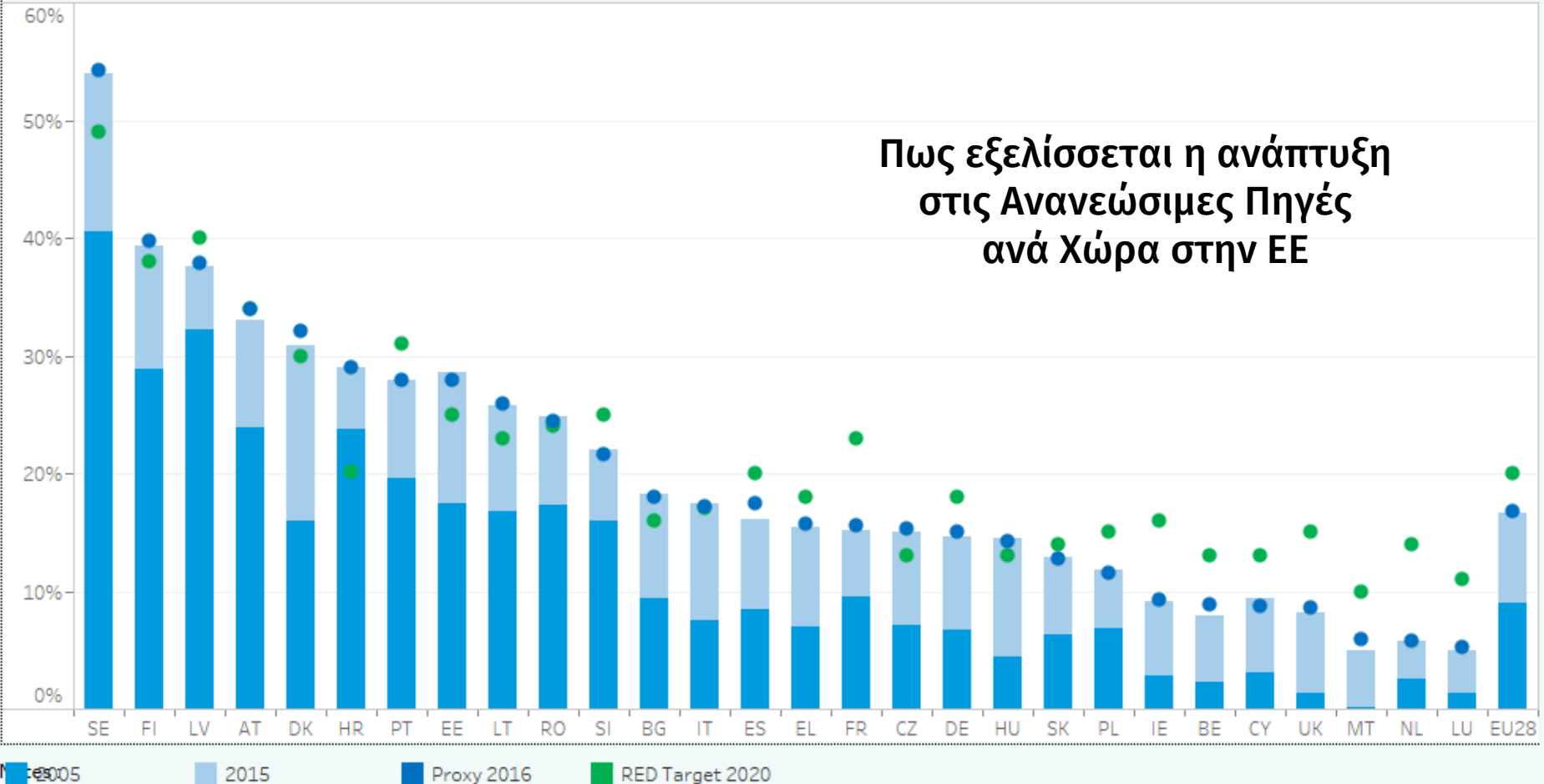
A row of wind turbines is silhouetted against a sunset sky. The sun is low on the horizon, creating a warm orange and yellow glow. The sky transitions to a deep blue at the top. The turbines are reflected in the calm water in the foreground. The overall scene is serene and emphasizes renewable energy.

**DASO**

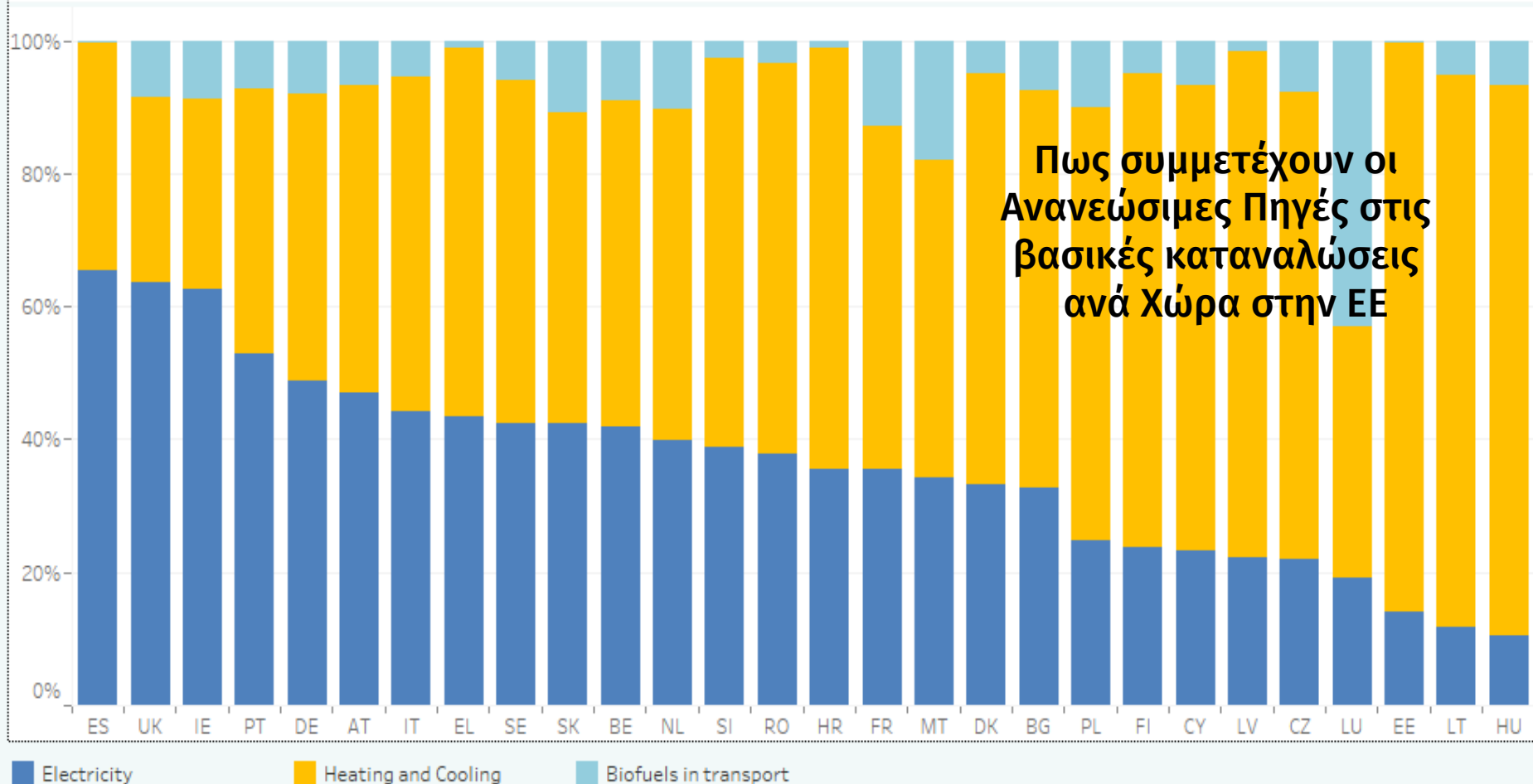
# Renewable energy in Europe 2017 Update

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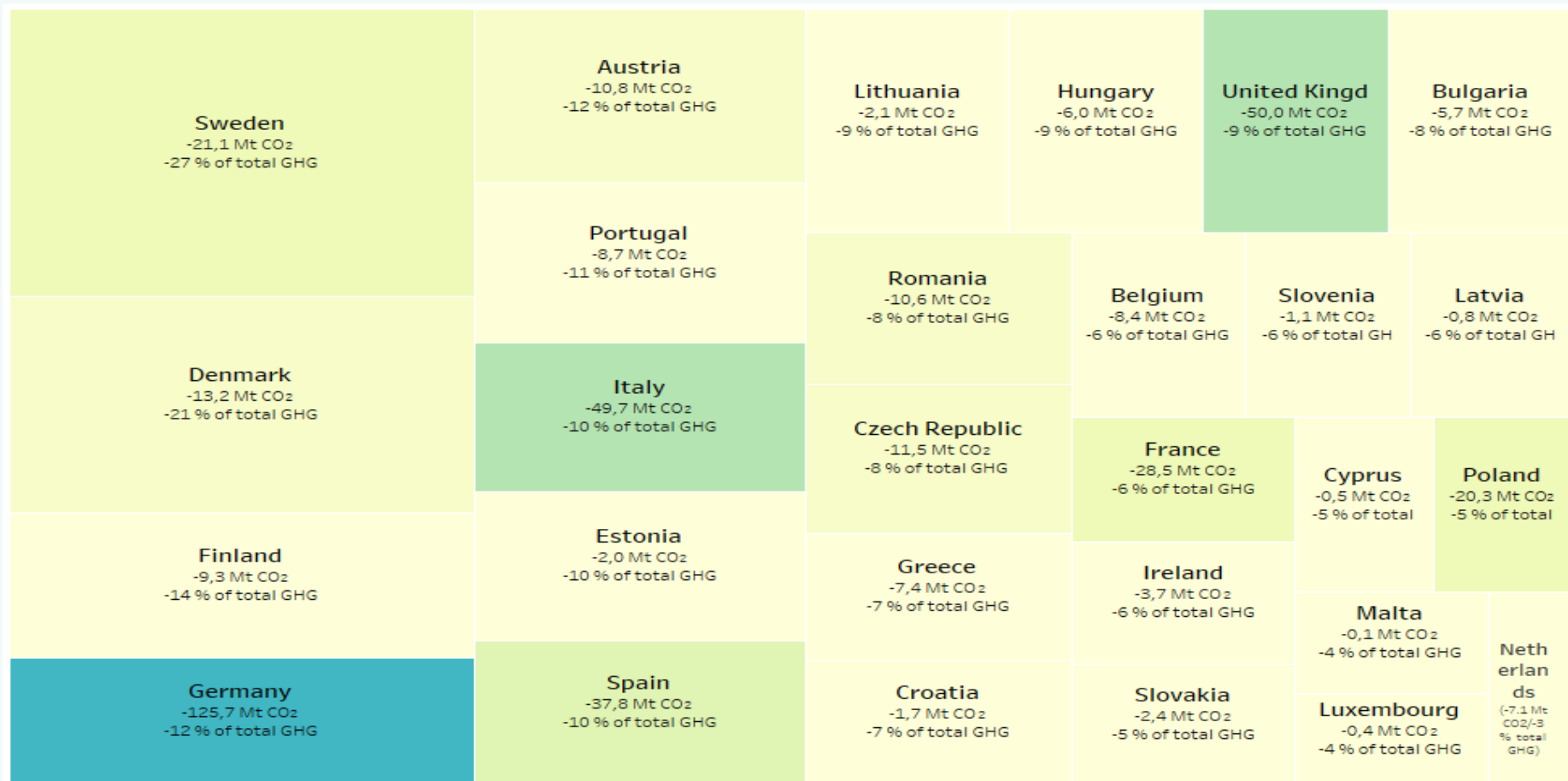
## Actual and approximated RES shares in the EU



Shares in 2015 RES consumption of renewable electricity, renewable heating and cooling, and biofuels in transport



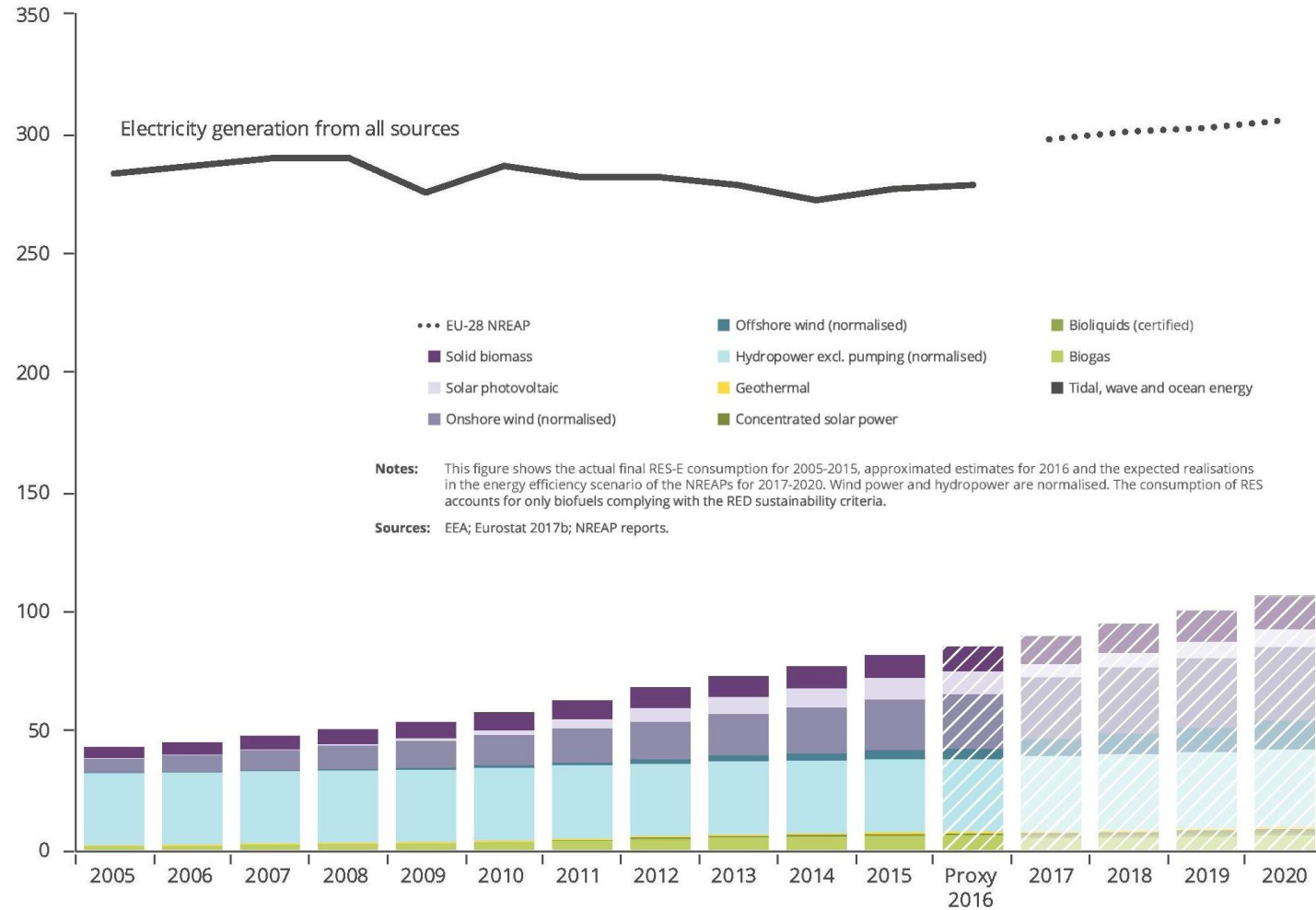
## Total and relative gross avoided GHG emissions (per year in 2015)



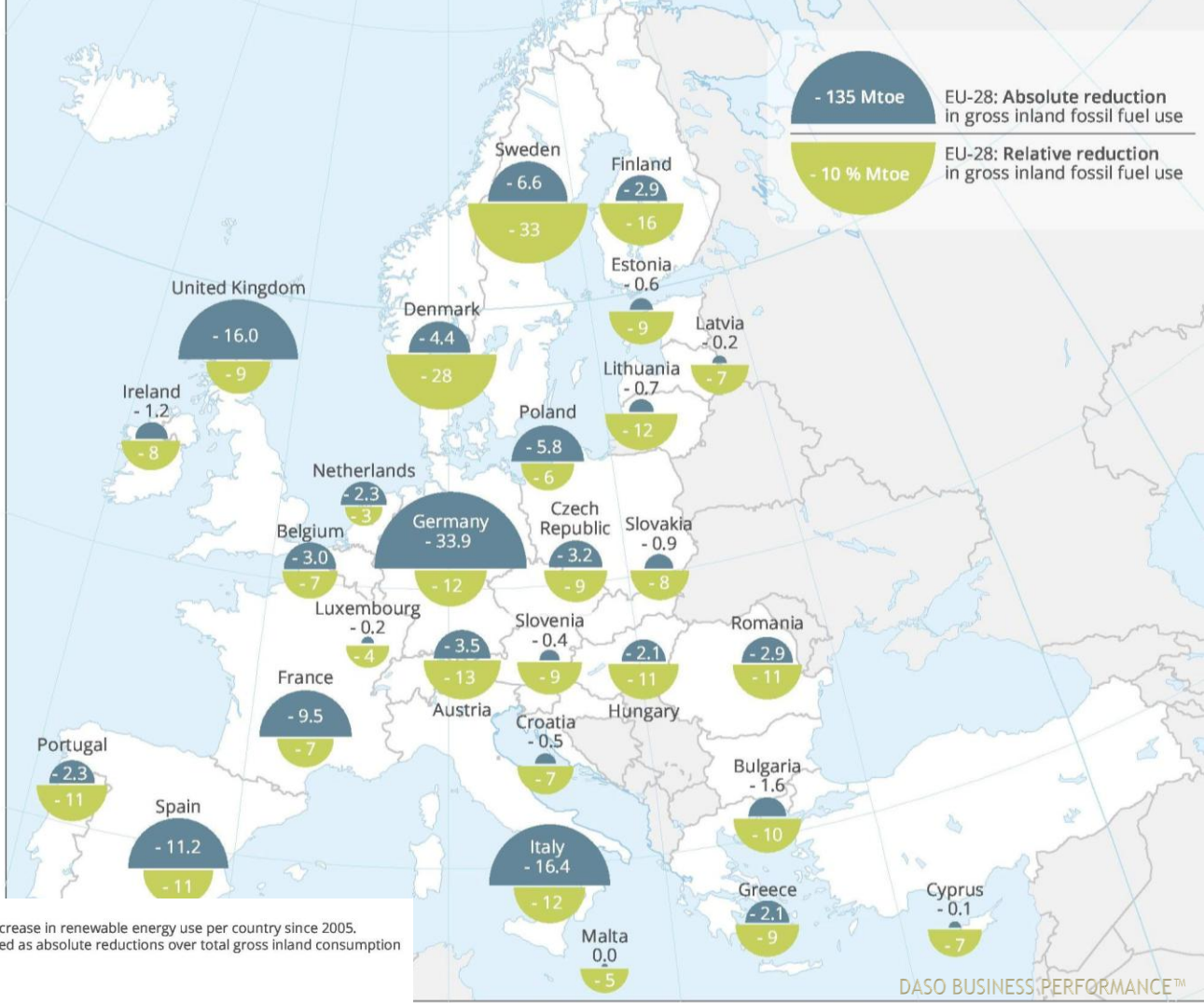
**Notes :** The area of each rectangle illustrates the relative RES impacts on total national GHG emissions. The larger the area, the more significant the share of a country's estimated gross avoided CO<sub>2</sub> within its total national GHG emissions (including international aviation and excluding LULUCF). The colour scheme illustrates total gross avoided GHG emissions. The deeper the shading, the higher the absolute RES effects (Mt gross avoided GHG emissions).

# RES-E in the EU28

Mtoe



# Total & relative reduction (2015) in gross inland fossil fuel use



## RES-E in the EU28 by RES Technology

Technology	Final energy (ktoe)					Annual growth rate (%)		
	2005	2014	2015	Proxy 2016 <sup>(a)</sup>	NREAP 2020	2005-2015	2014-2015	2015-2020
Hydropower excluding pumping (normalised)	29 588	29 975	30 053	29 881	31 786	0	0	1
Onshore wind (normalised)	5 670	18 884	20 708	22 337	30 303	14	10	8
Solid biomass <sup>(a)</sup>	4 756	8 983	9 583	10 310	13 460	7	7	7
Solar PV systems	126	7 938	8 799	9 279	7 062	53	11	- 4
Biogas	1 104	4 985	5 249	5 526	5 493	17	5	1
Offshore wind (normalised)	273	2 750	3 784	4 267	11 740	30	38	25
Geothermal energy	464	535	561	573	943	2	5	11
Concentrated solar power	0	469	481	481	1 633	n.a.	3	28
Bioliqids (certified)	0	406	467	467	1 096	n.a.	15	19
Tidal, wave and ocean energy	41	42	42	42	559	0	1	68
<b>Total RES-E (normalised, certified biofuels)</b>	<b>42 023</b>	<b>74 967</b>	<b>79 726</b>	<b>83 163</b>	<b>104 075</b>	<b>7</b>	<b>6</b>	<b>5</b>
<b>Total RES-E (normalised, including all biofuels) <sup>(b)</sup></b>	<b>42 175</b>	<b>74 977</b>	<b>79 732</b>	<b>83 251</b>	<b>104 075</b>	<b>7</b>	<b>6</b>	<b>5</b>

# Συμπέρασμα

1. Η ΕΕ προχωρεί ελαφρώς καλύτερα συνολικά, από την άποψη της ανάπτυξης των ΑΠΕ, σε σχέση με άλλα μέρη του κόσμου.
2. Σήμερα, η ΕΕ είναι παγκόσμιος ηγέτης όσον αφορά την κατά κεφαλήν ικανότητα ανανεώσιμης ενέργειας.
3. Μεταξύ του 2005 και του 2015, η ταχύτητα με την οποία η ΕΕ έχει μετατρέψει τη βάση ενεργειακών πόρων που υποστηρίζει την οικονομική της δραστηριότητα έχει ξεπεράσει αυτή των άλλων περιοχών του κόσμου.
4. Επιπλέον, οι ευρωπαϊκές εξελίξεις έχουν συμβάλει σημαντικά στην αρχική ανάπτυξη και ανάπτυξη τεχνολογιών ανανεώσιμων πηγών ενέργειας.



# Conclusion

1. **EU is progressing slightly better overall, in terms of RES deployment, than other parts of the world.**
2. **Today, the EU is a global leader in terms of renewable power capacity per capita.**
3. **Between 2005 and 2015, the speed at which the EU has transformed the energy resource base supporting its economic activity has outpaced that of other world regions.**
4. **Moreover, European developments have significantly contributed to the initial development and roll-out of renewable energy technologies.**