



German WindEnergy
Association (BWE)

The new German Renewable Energy Sources Act (EEG) and its impact on wind energy

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SIREME



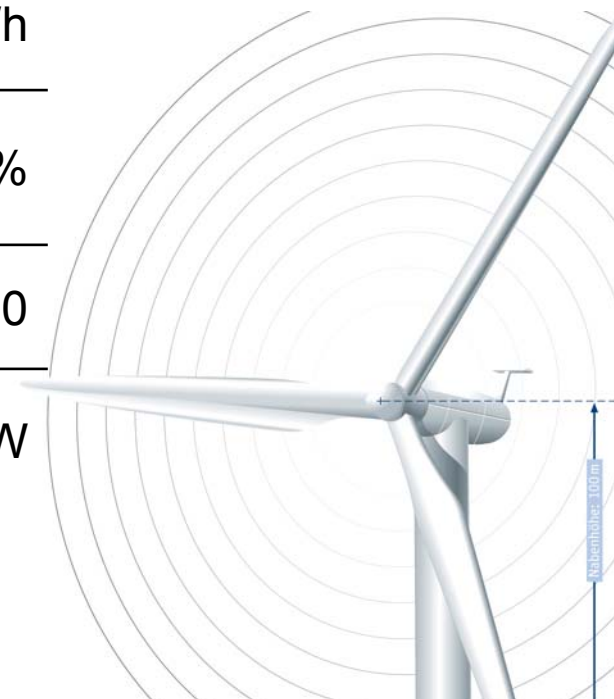
www.wind-energie.de

German wind market

Overview on the current situation

Wind Energy in Germany – data first half of 2008

Installed capacity	23,044 MW
Number of turbines	19,869
Annual energy yield (potential)	41.5 billion kWh
Share in gross electricity consumption (potential)	6.73 %
Employment	estimated 90,000
New capacity installed in first half 2008	799 MW



The German Renewable Energy Sources Act (EEG) – Amendments from 1st January 2009

EEG 2008: Higher remuneration and lower rate of degression

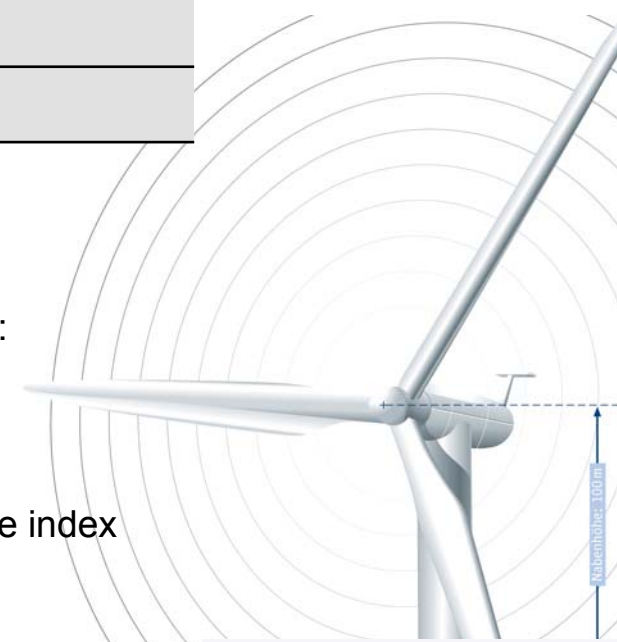
Remuneration for new turbines on land

EEG 2004: § 10

- Initial remuneration (2009): **7.87 ct/kWh**
- Basic remuneration (2009): **4.97 ct/kWh**
- Degression: **2% p.a.**
- **Not** linked to producer price index

EEG 2008: § 29

- Initial remuneration (2009): **9.20 ct/kWh**
- Basic remuneration (2009): **5.02 ct/kWh**
- Degression: **1% p.a.**
- **Not** linked to producer price index



EEG 2008: New Repowering bonus

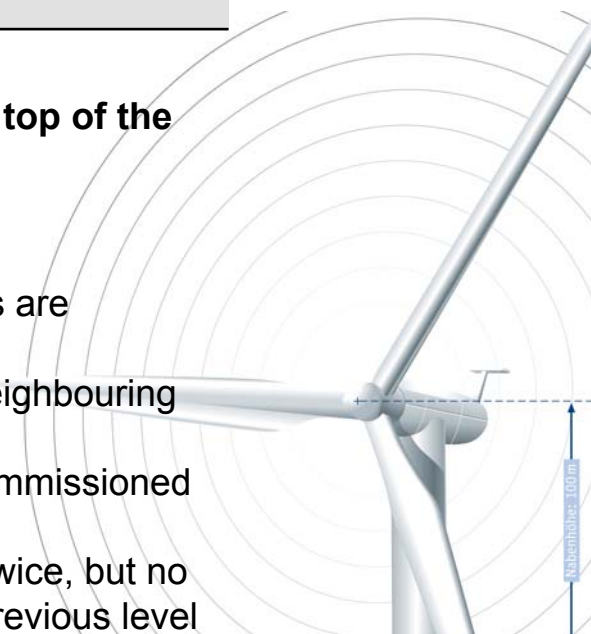
Repowering

EEG 2004: § 10 Sect. 2

- Initial remuneration paid for an extra 2 months at 0.6% of reference yield
- **Criteria:**
 - existing turbines are replaced or renewed
 - must be located in the same administrative district
 - original turbines commissioned before 31 Dec.1995
 - capacity is at least trebled

EEG 2008: § 30

- **NEW: Bonus payable on top of the initial remuneration** amounting to 0.50 ct/kWh
- **Criteria:**
 - one or several converters are completely replaced
 - located in the same or neighbouring administrative district
 - original turbine(s) first commissioned at least 10 years ago
 - new capacity is at least twice, but no more than five times the previous level

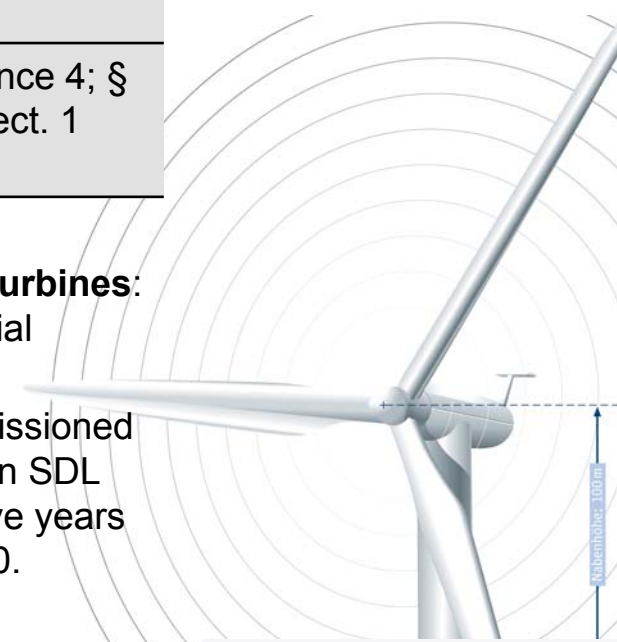


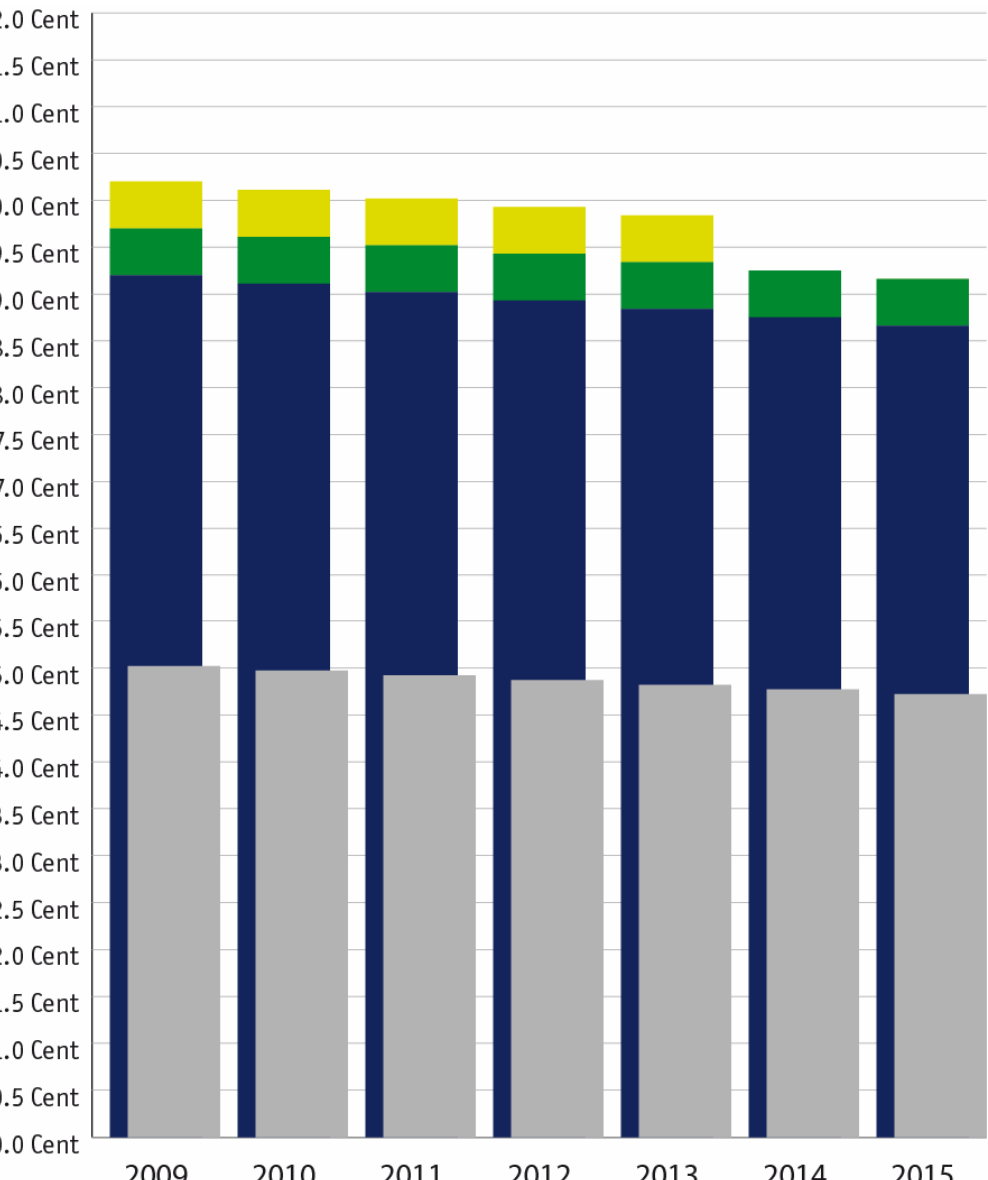
EEG 2008: Additional bonus for improved grid compatibility

System service bonus (SDL)

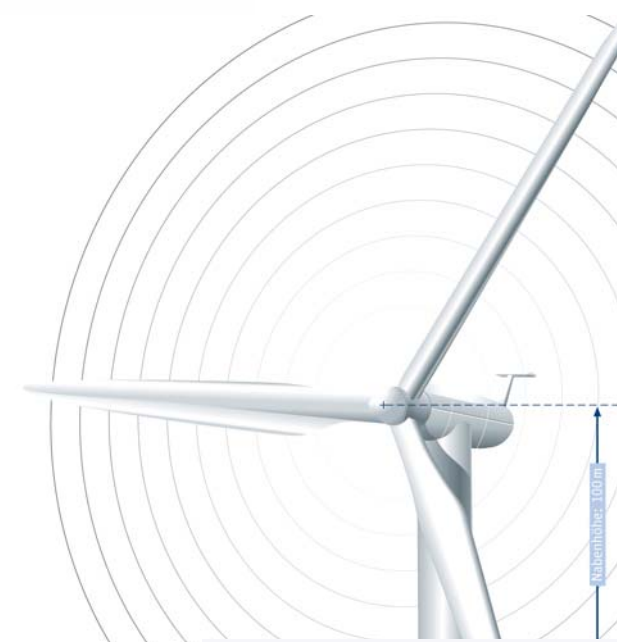
EEG 2004	EEG 2008: (§ 29 Sect. 2 sentence 4; § 66 Sect. 1 No. 6 i.V.m.; § 64 Sect. 1 No. 1)
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No provisions	<ul style="list-style-type: none"> • NEW: SDL bonus for new turbines: 0.5 ct/kWh on top of the initial remuneration • NEW: Old turbines (commissioned after 1 Jan. 2002) receive an SDL bonus of 0.7 ct/kWh over five years if upgraded by 31 Dec. 2010.
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- System service bonus (SDL)
- Repowering bonus
- 1. step recompensation
- Basic recompensation



EEG 2008: Increased remuneration for offshore wind

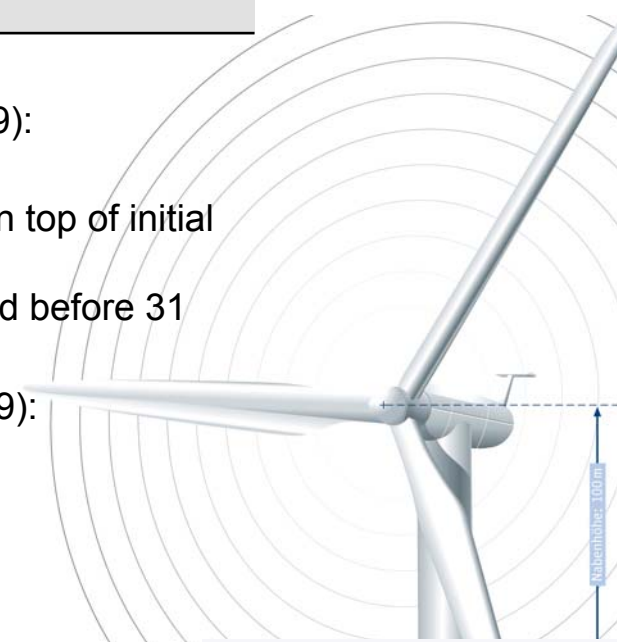
Offshore

EEG 2004: § 10 Sect.3

- Initial remuneration (2009): **8.74 ct/kWh**
- Basic remuneration (2009): **5.95 ct/kWh**
- Degression: **2% p.a.**

EEG 2008: § 31

- Initial remuneration (2009): **13 ct/kWh**
- **NEW: Sprinter bonus** on top of initial remuneration: **2 ct/kWh** if commissioned before 31 Dec. 2015
- Basic remuneration (2009): **3.50 ct/kWh**
- Degression: **5% p.a.** from 2015



EEG 2008: Better conditions for operators in terms of power generation management

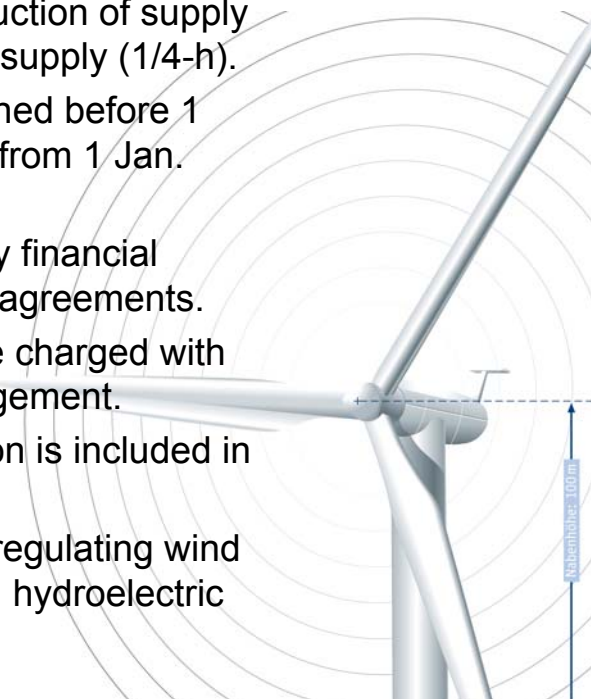
Feed-in management

EEG 2004:

- No financial compensation
- Preferential feed-in of renewable energy compared to fossil co-generation
- Equal treatment of all renewables

EEG 2008: (§ 6, 11, 12 i.V.m; § 66 Sect. 1)

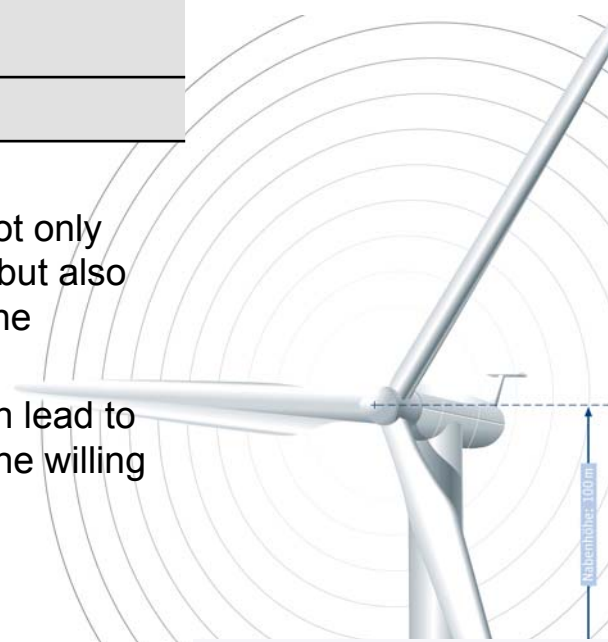
- **NEW:** Turbines over 100 kW need to be equipped for remote reduction of supply and monitoring of actual supply (1/4-h).
- Old turbines (commissioned before 1 Jan. 2009) must comply from 1 Jan. 2011.
- **NEW:** Grid operators pay financial compensation based on agreements.
- **NEW:** Grid operators are charged with optimising feed-in management.
- **NEW:** fossil co-generation is included in preferential feed-in.
- **NEW:** Lower priority for regulating wind energy (same as PV and hydroelectric power).



EEG 2008: Grid operators have a duty to extend and optimise the grid. Failure to comply may lay them open to claims for losses!

Grid extension and losses

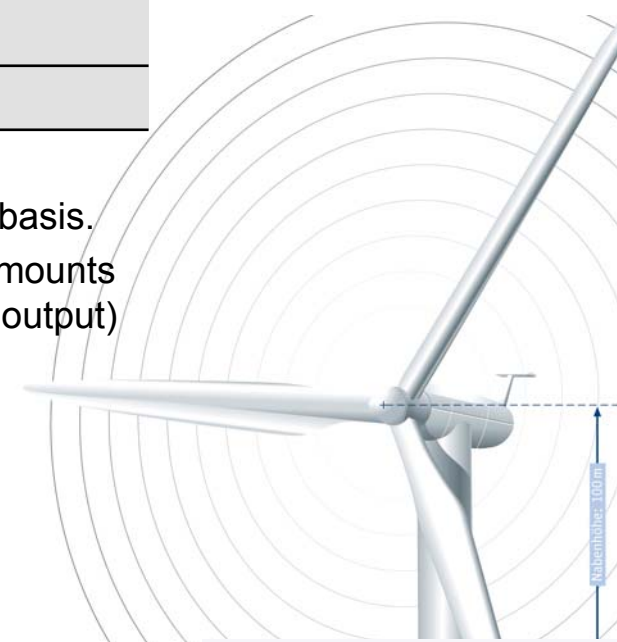
EEG 2004:	EEG 2008: §9 and §10
<ul style="list-style-type: none">Duty to extend the grid.	<ul style="list-style-type: none">NEW: Grid operators are not only obliged to extend the grid, but also to optimise and enhance the existing grid.NEW: Failure to comply can lead to claims for losses by anyone willing (but unable) to feed in.



EEG 2008: Clear rules for selling wind power on the stock exchange

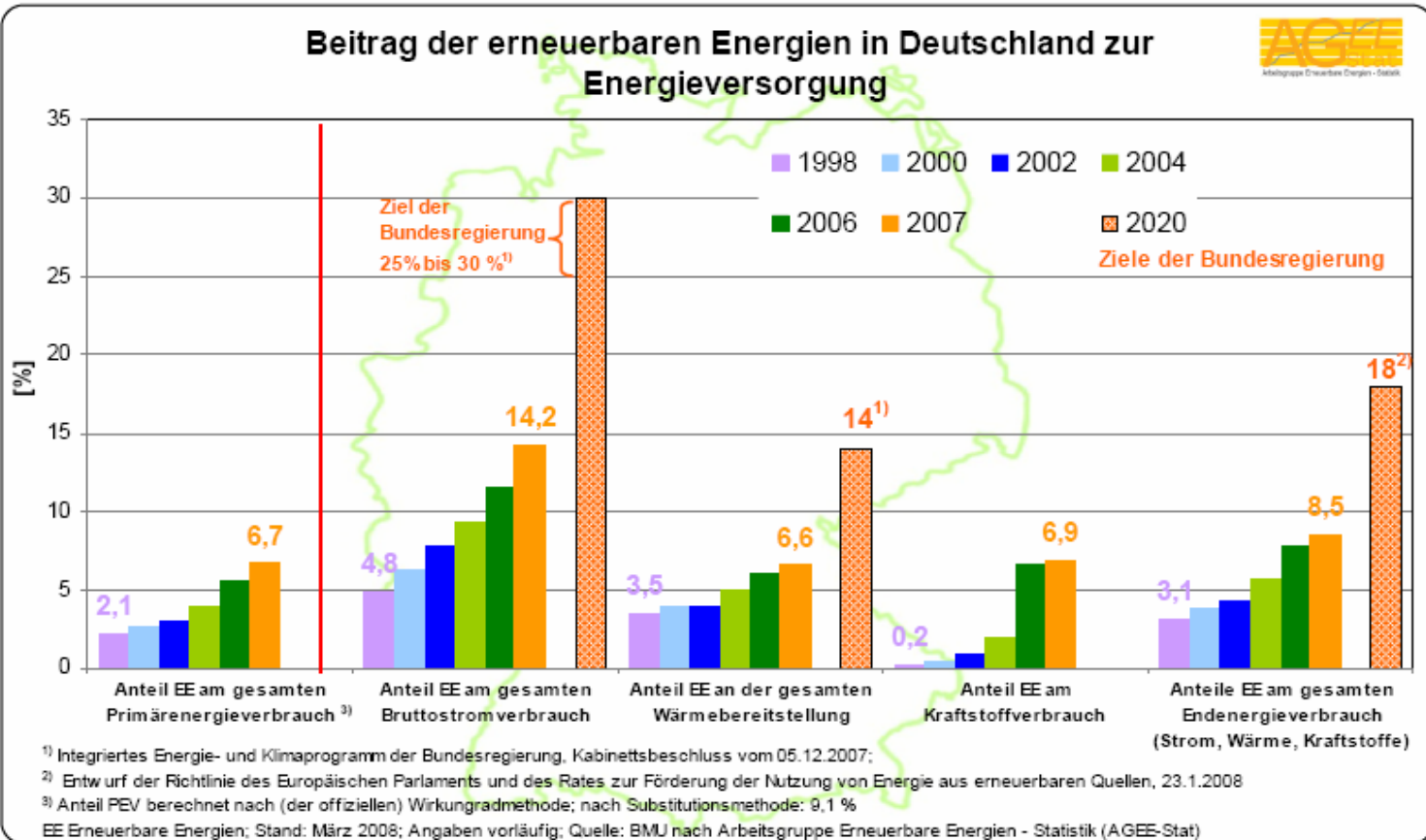
Direct marketing

EEG 2004:	EEG 2008: §17
<ul style="list-style-type: none">• Entry and exit at any time, but not accepted by transmission grid operators and Federal Network Agency (BNetzA).	<ul style="list-style-type: none">• Entry and exit on a monthly basis.• NEW: Marketing of partial amounts (fixed percentage of current output)



Perspectives of wind energy in Germany until 2020

German EU-target for renewable energy: 18 % until 2020



**= More than 30 % renewable electricity until 2020
 (Energy and Climate Programme end 2007 / EEG 2008)**

Wind Energy in Germany – data today and BWE projections for 2020

	2007	2020
Installed capacity	22,247 MW	55,000 MW 45,000 MW onshore 10,000 MW offshore
Number of turbines	19,460	20,000 -25,000
Electricity generation	39.5 billion kWh	110 billion kWh
Share in net electricity consumption	6.4 %	20-25 %





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